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# Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments

## Report of the Secretary-General

*Summary*

The present report is prepared in response to paragraph 83 of General Assembly resolution 59/25. The report contains information on steps and initiatives taken or recommended by the international community to improve the conservation and management of fishery resources and other marine living resources with a view to achieving sustainable fisheries and protecting marine ecosystems and biodiversity.

The report is based on information provided by States, relevant specialized agencies, in particular the Food and Agriculture Organization of the United Nations (FAO), and other appropriate organs, organizations and programmes of the United Nations system, regional and subregional organizations and arrangements for the conservation and management of straddling fish stocks and highly migratory fish stocks, and other relevant intergovernmental bodies and non-governmental organizations.

The report emphasizes the importance of the full implementation by States of all international fishery instruments, whether legally binding or voluntary, which provide for conservation and management measures and sustainable use of marine living resources. It also invites States to: cooperate in all aspects of fishery conservation and management, including the establishment of new regional fisheries

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management organizations where none exist in a particular region or subregion; apply both the precautionary and the ecosystem approaches; and collect and exchange fishery data and statistics.

In response to requests in resolution 59/25, the report includes information on actions taken to address the issue of lost or abandoned gear and marine debris and the questions of destructive fishing practices and the regulation of bottom fisheries. In accordance with the terms of reference of the United Nations Fish Stocks Agreement Assistance Fund, a brief report on the status and activities of the Fund is included.

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## Abbreviations

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| ACCOBAMS | Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area |
| APEC | Asia-Pacific Economic Cooperation |
| BCLME | Benguela Current Large Marine Ecosystem |
| BSERP | Black Sea Ecosystem Recovery Project |
| CBD | Convention on Biological Diversity |
| CCAMLR | Commission for the Conservation of Antarctic Marine Living Resources |
| CECAF | Fishery Committee for the Eastern Central Atlantic |
| CITES | Convention on International Trade in Endangered Species of Wild Fauna and Flora |
| CMS | Convention on the Conservation of Migratory Species of Wild Animals |
| CPPS | South Pacific Permanent Commission |
| CRFM | Caribbean Regional Fisheries Mechanism |
| EAF | Ecosystem approach to fishery |
| EC | European Community |
| EEZ | Exclusive economic zone |
| EU | European Union |
| FAO | Food and Agriculture Organization of the United Nations |
| FFA | South Pacific Forum Fisheries Agency |
| FIGIS | Fisheries Global Information System |
| GEF | Global Environment Facility |
| GESAMP | Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection |
| IATTC | Inter-American Tropical Tuna Commission |
| ICCAT | International Commission for the Conservation of Atlantic Tunas |
| ICES | International Council for the Exploration of the Sea |
| ILO | International Labour Organization |
| IMO | International Maritime Organization |
| IPHC | International Pacific Halibut Commission |
| IUCN | World Conservation Union |
| MPA | Marine Protected Area |
| NACA | Network of Aquaculture Centres in Asia and the Pacific |

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| NAFO | Northwest Atlantic Fisheries Organization |
| NASCO | North Atlantic Salmon Conservation Organization |
| NEAFC | North East Atlantic Fisheries Commission |
| NPAFC | North Pacific Anadromous Fish Commission |
| OIE | World Organization for Animal Health |
| OLDEPESCA | Latin American Fisheries Development Organization |
| OSPESCA | Organización del Sector Pesquero y Acuícola del Istmo Centroamericano |
| RFMO | Regional fisheries management organization |
| SEAFDEC | Southeast Asian Fisheries Development Center |
| SPC | Secretariat of the Pacific Community |
| TAC | Total allowable catch |
| UNCLOS | United Nations Convention on the Law of the Sea |
| UNDP | United Nations Development Programme |
| UNEP | United Nations Environment Programme |
| VMS | Vessel monitoring system |
| WCPFC | Western and Central Pacific Fisheries Commission |
| WECAFC | Western Central Atlantic Fishery Commission |
| WFC | World Fish Center |
| WWF | World Wide Fund for Nature |
| YSLME | Yellow Sea Large Marine Ecosystem |

# I. Introduction

1. In its resolution 59/25 of 17 November 2004, the General Assembly reaffirmed the importance of achieving sustainable fisheries through the long-term conservation, management and sustainable use of marine living resources of the world's oceans and seas and the obligation of States to cooperate to this end, in accordance with the relevant provisions of the United Nations Convention on the Law of the Sea (UNCLOS)[1] and related fisheries instruments. The Assembly called upon all States that had not yet done so to become parties to the Convention, which sets out the legal framework within which all activities in the oceans and seas must be carried out, to the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (the United Nations Fish Stocks Agreement)[2] and to the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (the Food and Agriculture Organization of the United Nations (FAO) Compliance Agreement).

2. The resolution covered a broad range of issues, including all aspects of the conservation and management of international fisheries. The Secretary-General was requested to bring resolution 59/25 to the attention of all members of the international community and to invite them to provide information on measures they have taken to ensure its implementation. The present report is based upon replies to questionnaires sent to States, specialized agencies, programmes and bodies of the United Nations system, other intergovernmental organizations, regional fisheries management organizations (RFMOs) and relevant non-governmental organizations (see annex).

# II. Importance of the implementation of all international instruments for the conservation and management of fishery resources

3. The adoption of international instruments alone, whether voluntary or legally binding, is not sufficient to ensure the conservation and sustainable use of fishery resources and to provide protection to marine biodiversity and vulnerable marine ecosystems. To be effective, international instruments must be implemented through concrete measures at the national, subregional and regional levels.

## A. The United Nations Fish Stocks Agreement

4. The United Nations Fish Stocks Agreement is considered to be the most important multilateral legally binding instrument for the conservation and management of high seas fisheries since the conclusion of UNCLOS in 1982. Its objective is to ensure the long-term conservation and sustainable use of straddling and highly migratory fish stocks through effective implementation of the relevant provisions of UNCLOS. To that end, the Agreement establishes a clear set of obligations for States to conserve and manage the two types of stocks and associated and dependent species, and to protect marine biodiversity. It requires States to cooperate in the implementation of its provisions, including in the establishment of

new RFMOs where none exist. The United Nations Fish Stocks Agreement also contains provisions for individual flag State enforcement, subregional and regional cooperation in enforcement and measures by the port States to ensure compliance with international conservation and management measures.

5. Although the United Nations Fish Stocks Agreement addresses only straddling and highly migratory fish stocks, some of its provisions, including those on application of the precautionary and ecosystem approaches to fishing activities, may be applied to the conservation and management of all marine capture fisheries and are now often associated with the "generally recommended international minimum standards" for the conservation of marine living resources, as referred to in the relevant provisions of UNCLOS (see article 61, para. 3, and article 119, para. 1 (a)). To date, 52 States and the European Community (EC) have become parties to the Agreement.

### 1. Towards implementation of the Agreement

6. **Flag States**: article 18 of the Agreement outlines the duties of flag States parties to the Agreement. On the basis of the general principle of flag State responsibility for vessels fishing on the high seas, it sets out specific obligations that the State must fulfil before allowing its vessels to conduct fishing operations on the high seas and in areas under the competence of RFMOs. It stresses that the essential obligation of the flag State is to ensure that vessels flying its flag comply with the conservation and management measures of RFMOs and do not undermine their effectiveness. To that end, a flag State should not authorize its vessels to fish on the high seas unless it is able to exercise effectively its responsibilities in respect of such vessels under UNCLOS and article 18, paragraph two of the United Nations Fish Stocks Agreement. In accordance with article 18, paragraph 3, the flag State is required to take measures to control its vessels fishing on the high seas by means of licences, authorizations or permits and to adopt regulations that include: the prohibition of fishing on the high seas without authorization; the prohibition of fishing in contravention of the terms of licences or permits; the obligation to carry on board vessels the licences, authorizations or permits; and the prohibition of fishing without a permit in areas under the national jurisdiction of other States. In addition, the flag State must establish a national record of fishing vessels flying its flag authorized to fish on the high seas and provide information on request to interested States and must ensure: the marking of fishing vessels and fishing gear for identification, in accordance with international standards; the recording and timely reporting of all relevant fisheries data; the implementation of observer programmes and inspection schemes; the provision of unloading reports; the supervision of trans-shipment; and the implementation of monitoring, control and surveillance (MCS) and vessel monitoring systems (VMS) compatible with those in effect at the subregional, regional or global level.

7. Several respondents, including non-States parties to the United Nations Fish Stocks Agreement (EC, Kuwait, Morocco, New Zealand, Pakistan, Portugal, the United Kingdom of Great Britain and Northern Ireland and the United States of America), reported that they had incorporated these provisions into their domestic legislation. For non-States parties such as Kuwait, Morocco and Pakistan, incorporation of many provisions of article 18 often derives from compliance with other international obligations, at either the global or regional level since the regulations of RFMOs include requirements of the FAO Compliance Agreement.

8. National laws and regulations include requirements for fishing vessels to obtain an authorization, licence or permit from the flag State authorities before they are allowed to engage in high seas fishing.[3] Decisions by flag States to grant authorizations or permits are often conditioned by the applicant's compliance history with international fishery regulations and with the conditions in permits or authorizations (New Zealand, Saudi Arabia (A/55/386, para. 112) and United States). In New Zealand, authorizations are granted only after consultation with the RFMO concerned. In the United States and Saudi Arabia, authorization is given only if it is established that the proposed activities would not undermine conservation and management measures. Laws and regulations may also provide for the flag State to keep a national record or permit register of vessels authorized to fish on the high seas (Croatia, EC, Morocco, New Zealand, United Kingdom and United States) or, in the case of EC, a Community register of all community fishing vessels. Member States retain their own national registers of vessels. EC explained that while it had the responsibility to incorporate into its laws and regulations all of its obligations under international agreements, member States had to implement the law through the necessary controls over their vessels.[4]

9. The United States and New Zealand reported that they had ensured compliance by their vessels with conservation and management measures adopted by RFMOs of which they were members by providing general information to industry on requirements for fishing on the high seas and specific information on obligations in areas covered by RFMOs. States have also required the marking of vessels (New Zealand and United States) and gear (New Zealand and Morocco) and the carriage on board of VMS or other systems for monitoring and surveillance (Croatia, France, Morocco, New Zealand, Pakistan (see A/57/459, para. 44), Portugal, United Kingdom and United States). The United States indicated that it has improved its monitoring, control and surveillance by implementing a new national vessel monitoring system.

10. Fishery laws and regulations often require vessels conducting fishing operations on the high seas to maintain a logbook (Portugal), submit catch and effort reports (EC, New Zealand and United States), carry observers (Morocco, New Zealand and United States), restrict or prohibit at-sea trans-shipments (New Zealand and Portugal) and implement port inspection requirements (EC, Morocco and New Zealand). They also provide for aerial and maritime surveillance (Croatia, New Zealand and Portugal), and other surveillance schemes (Kuwait) under the aegis of RFMOs, and impose sanctions for violations of RFMO conservation and management measures, including severe penalties and forfeiture of fishing vessels and equipment (New Zealand and United States).

11. **Cooperation in enforcement**: article 21 of the United Nations Fish Stocks Agreement provides for the boarding and inspection of fishing vessels on high seas areas covered by RFMOs with the competence to manage straddling fish stocks and highly migratory fish stocks. Under paragraph 1, a member State of an RFMO may, through its duly authorized inspectors, board and inspect fishing vessels flying the flag of another State party to the Agreement, whether or not that State party is also a member of the RFMO, in order to ensure compliance with conservation and management measures established by the RFMO. Prior to taking such action, inspecting States parties must inform all States whose vessels fish in the areas of the form of identification issued to their duly authorized inspectors. Under paragraph 4

of the article, States parties must also designate appropriate authorities to receive notifications and give due publicity of such designation through the relevant RFMO.

12. The obligation to establish cooperative schemes for enforcement to ensure compliance with RFMO regulations is considered to be a key provision of the United Nations Fish Stocks Agreement, albeit one of the least implemented. Although a number of RFMOs have adopted enforcement and inspection schemes for their regulatory areas, none of them has applied article 21 *stricto sensu*. Even though the Northwest Atlantic Fisheries Organization (NAFO) has a non-flag State enforcement scheme on the high seas it reported that it had not applied the provisions of article 21, paragraph 8, which allow inspectors, following boarding and inspection, to detain at the nearest port, any vessel suspected of serious fishing violations.

13. States parties reporting on regional cooperation in enforcement stated that they had incorporated inspection and enforcement schemes applicable in areas under the competence of RFMOs of which they are members into their domestic legislation. New Zealand reported that it had concluded agreements for bilateral, regional and subregional cooperation in enforcement with States in their regions, including cooperation for the investigation of alleged offences. France, New Zealand, Portugal and the United States reported that they had also established port State control of foreign flagged vessels entering their ports. EC, New Zealand and the United States reported that they are members of the International Network for the Cooperation and Coordination of Fisheries-Related Monitoring, Control, and Surveillance Activities.

14. Some respondents made particular reference to their participation in the inspection and enforcement schemes in force in the regulatory areas covered by NAFO, the North East Atlantic Fisheries Commission (NEAFC) and the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) (EC in the case of NAFO and NEAFC and New Zealand in the case of CCAMLR). With respect to paragraph 4, EC indicated that it had provided notification of its inspectors and given due publicity of the authority entitled to receive notifications through relevant RFMOs (CCAMLR, NAFO, NEAFC and Inter-American Tropical Tuna Commission (IATTC)). New Zealand indicated that it had implemented article 21 when undertaking high seas boarding and inspection in areas covered by RFMOs that have established boarding and inspection regimes. It had also conducted regular surveillance in maritime areas under its national jurisdiction and in areas regulated under CCAMLR, as well as in the exclusive economic zones of Pacific island countries requesting assistance. The United States reported that, although it had never taken law enforcement action under article 21, when fishing vessels of another State conducted fishing operations or indicated their intention to fish in a region managed by an RFMO where management measures are enforceable at sea it would notify that State through diplomatic channels of its duly authorized officials entitled to conduct boarding and inspections in the regulatory area.

15. Despite disparities in their practices, States parties are making an effort to cooperate in the implementation of existing enforcement schemes in RFMOs of which they are members, within the legal and institutional constraints governing such RFMOs, where States parties to the Agreement are not necessarily in the majority. Instead of implementing article 21, RFMOs such as CCAMLR, the International Commission for the Conservation of Atlantic Tuna (ICCAT) and

NEAFC have adopted port States measures pursuant to article 23, including prohibition of landings and trans-shipments of illegal catches.

### 2. Fourth round of the informal consultations of States parties to the Agreement

16. The fourth round of the informal consultations of States parties to the Agreement was held at United Nations Headquarters from 31 May to 3 June 2005. Pursuant to paragraph 18 of General Assembly resolution 59/25, the informal consultations considered issues related to the preparation of the review conference to be convened by the Secretary-General in accordance with article 36 of the Agreement. The report of the meeting is available on the website of the United Nations Division on the Law of the Sea at http://www.un.org/Depts/los/convention_agreements/fishstocksmeetings/icsp4report.pdf.

## B. Other international fishery instruments

17. **The FAO Compliance Agreement**: the Compliance Agreement is aimed at strengthening the responsibilities of flag States with respect to fishing vessels entitled to fly their flag and operating on the high seas, with a view to ensuring that those vessels comply with international conservation and management measures. Article III of the Compliance Agreement provides that a vessel is entitled to fish on the high seas if it has been authorized to do so by its flag State, and that the flag State concerned shall grant such authorization only if it is able to effectively exercise its responsibilities over the fishing vessel. The authorization to fish will end with the entitlement of the fishing vessel to fly the flag of the State that granted the authorization. Article IV requires States parties to maintain a record of fishing vessels entitled to fly their flag and authorized by them to operate on the high seas. Article V also requires States parties to exchange information on activities of fishing vessels in order to assist the flag State in identifying those fishing vessels flying its flag reported to have engaged in activities undermining international conservation and management measures. Lastly, under article VI, States parties have an obligation to provide FAO with all information relating to each fishing vessel flying their flag entered in the national record of fishing vessels. To date, 29 States and EC have accepted the Compliance Agreement.

18. In 1995, FAO established a "High Seas Vessels Authorization Record" containing information on registration, authorization status and infringements of fishing vessels. In August 2005 there were more than 5,700 authorized high seas fishing vessels. Four parties to the Compliance Agreement (EC, Morocco, Myanmar and United States)[5] stated that they had fulfilled their obligations to exchange information consistent with article V. EC and Morocco have provided RFMOs of which they are members with information on vessels fishing in areas under their competence or on vessels conducting illegal, unreported and unregulated (IUU) fishing. In accordance with article VI, they have also provided FAO with information relating to all their fishing vessels.[6] Some parties have implemented the provisions of the Compliance Agreement through national legislation (United States) and control policy (EC). The United States indicated that its High Seas Fishing Compliance Act requires all vessels flying its flag and intending to fish on the high seas to obtain permits, which grant authorization and require that their fishing practices conform to all internationally agreed conservation and management measures of RFMOs that are binding on or recognized by the United States.

19. Four non-parties (Kuwait, the Philippines, Saudi Arabia and Serbia and Montenegro) indicated their intention to become parties to the Compliance Agreement. New Zealand and Pakistan reported that although they did not yet have an obligation to do so, they had nonetheless communicated to FAO information on measures they had adopted relevant to its implementation. Croatia and Pakistan reported that they had provided information on matters covered in the Compliance Agreement to RFMOs of which they are members (Indian Ocean Tuna Commission in the case of Pakistan). Croatia indicated that it was applying the Compliance Agreement provisionally through various domestic laws and regulations.

20. **The FAO Code of Conduct for Responsible Fisheries**: the FAO Code of Conduct sets out principles and international standards of behaviour for responsible practices with a view to ensuring the effective conservation, management and development of living aquatic resources, with due respect for the ecosystem and for biodiversity. The Code encourages States and those involved in fisheries, including RFMOs, to ensure its implementation. Four international plans of action have been adopted in furtherance of the Code: the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU); the International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries (IPOA-Seabirds); the International Plan of Action for the Conservation and Management of Sharks (IPOA-Sharks); and the International Plan of Action for the Management of Fishing Capacity (IPOA-Capacity).

21. **The FAO Strategy for Improving Information on Status and Trends of Capture Fisheries**: the FAO Strategy is a voluntary instrument, aimed at providing a framework, strategy and plan for the improvement of knowledge and understanding of fishery status and trends as a basis for fisheries policymaking and management for the conservation and sustainable use of fishery resources within ecosystems. The Strategy applies to all States and entities, requiring actions including: data collection systems in small-scale fisheries and multispecies fisheries; better information on status and trends of fisheries, including integration of ecosystem considerations into fisheries management; a global inventory of fish stocks and fisheries; participation in the Fisheries Global Information System (FIGIS); structuring and capacity-building; the development of criteria and methods for ensuring information quality and security; the development of arrangements for the provision and exchange of information; the establishment of working groups to assess the status and trends of fisheries; sustainable data collection and information on the status and trends of fisheries; and capacity-building.

22. **States**: Croatia, EC, New Zealand, Pakistan, the Philippines, Serbia and Montenegro and the United States reported that they had incorporated the relevant provisions of the FAO Code into their fishery legislation and policy. Croatia and Pakistan had translated it, when possible, into their national languages. EC, Morocco, Myanmar, New Zealand, Pakistan, the Philippines and the United States reported that they had established fisheries management plans that provided an appropriate policy, legal and institutional framework to foster the long-term conservation and sustainable use of fisheries resources, including promotion of a co-management approach (United Kingdom), use of appropriate management tools such as closed seasons, gear restriction, size and area restrictions (Portugal, Saudi Arabia and United Kingdom), regional cooperation in the management of shared stocks (Portugal, Saudi Arabia and United Kingdom), use of the best scientific information in decision-making and application of the precautionary and ecosystem

approaches to fisheries management (EC and United Kingdom). Qatar and Saudi Arabia reported they had developed fish statistics programmes to collect data on fish catch, fishing vessels and fishing effort and had taken measures to prohibit the use of all destructive fishing methods. Morocco and Portugal reported that they had initiated awareness campaigns on the importance of responsible fisheries and the principles in the FAO Code for the benefit of fishing operators. Morocco stated that it had endeavoured to participate in global and regional scientific and technical activities promoting responsible fisheries, and had established new centres for fishery research.

23. EC, Myanmar, New Zealand, Pakistan, the Philippines, Portugal and the United States indicated that they had taken measures to ensure that the fishing activities of vessels flying their flag on the high seas and in areas under the jurisdiction of other States were reported, monitored and carried out in a responsible manner. Morocco, New Zealand, Pakistan, Portugal and the United States reported that they had taken measures to minimize catch of non-target species, such as the use of turtle excluding devices, mesh size limitations, confiscation of catches, the prohibition of landings of juveniles and/or discards, levies on by-catch, and season/area closures of fishing grounds to limit by-catch and discards. Other respondents (EC, France, Myanmar, New Zealand, Pakistan, Portugal and United States) reported that they require the use of VMS or are in the process of introducing such a requirement (Croatia), to monitor fishing activities in areas under their national jurisdiction (Morocco) or to ensure compliance by their vessels with international conservation and management measures.

24. Several States have provided information on their implementation of the international plans of action. New Zealand, the United Kingdom and the United States, which provided information on their national plans of action on seabirds, indicated that they aimed to protect seabirds in longline fisheries. Some already have the legal apparatus to provide protection to seabirds. In the United States, the Magnuson-Stevens Fishery Conservation and Management Act, the Endangered Species Act and the Migratory Bird Treaty Act can help in reducing the incidental catch of seabirds in longline fisheries. In New Zealand, a combination of measures such as codes of practice, input controls, economic instruments, by-catch limits and prosecution of those violating fisheries laws, are applied by the authorities to achieve the goals and objectives of the national plan of action. Mitigation measures in laws and regulations include: observer coverage on longliners, the use of tori-streamers and other bird-scaring devices, night setting, the strategic dumping of offal, the use of fully thawed baits, the removal of hooks from discarded offal and the release of birds that come on board alive.

25. Several States indicated that they were contributing to FIGIS to improve reporting on the status and trends on fisheries. They have fulfilled key elements of the FAO Strategy by participating in international scientific meetings, such as FAO technical meetings on FIGIS-Fisheries Resources Monitoring System (FIRMS), by submitting fishery statistics and required data to FAO (EC and United States) and relevant RFMOs (United Kingdom) and through implementation and enforcement of their domestic legislation, which requires comprehensive reporting of catch and effort information (New Zealand). Pakistan and Saudi Arabia reported that they were in the early stage of implementing the Strategy, creating awareness among stakeholders on the importance of statistics in capture fisheries and the need for fisheries institutions to improve capacity-building in that field. Qatar has established

national institutions to increase marine scientific research. Croatia has established a system for fisheries statistics to facilitate delivery of data to FAO and other organizations. Morocco monitors landings and uses a catch reporting system to improve data verification and a mechanism to ensure the traceability of fish products. All States have drawn attention to the need to extend financial and technical assistance to developing countries to implement the Strategy.

26. **RFMOs**: many RFMOs (CCAMLR, CECAF, CPPS, FFA, IATTC, ICCAT, IPHC, NAFO, NASCO, NEAFC, OLDEPESCA and SPC) stated that the Code of Conduct had provided a basis for adopting measures to address resource development and the management of fishing operations. They indicated that their fisheries management plans or regulations included key tools recommended in the Code, such as: use of the best evidence available in addressing conservation and management issues; stock assessment; use of stock-specific target points and measures to ensure that the level of fishing is commensurate with the state of fishery resources; prohibition of non-selective fishing methods; protection of endangered species; management of fishing capacity; and due consideration of the marine environment, biodiversity, habitats and ecosystems. The secretariat of the Pacific Community (SPC) reported that it had used the Code as the basic framework for the elaboration of more detailed regional measures. ICCAT has established a record of vessels authorized to conduct fishing operations in its regulatory areas and has adopted regulations for chartering arrangements. The South Pacific Permanent Commission (CPPS) is developing activities to promote implementations of the Code in its area of competence in cooperation with FAO. The North Atlantic Salmon Conservation Organization (NASCO) reported that although it had not taken any specific measure to promote application of the Code, it had nonetheless applied several of its principles.

## III. Responsible fisheries in the marine ecosystem

27. Fishery resources contribute to food security, poverty alleviation and the economy and the well-being of many countries worldwide. However, fishery resources are not infinite and can be adversely affected by the way in which they are exploited. Certain fish stocks have declined to the point where their commercial value has become insignificant. Other stocks have been so substantially reduced that their biological survival is seriously threatened. The situation is mainly caused by inadequate fishery conservation and management measures and increasing fishing pressure, resulting in overfishing and the destruction of the marine ecosystems and habitats that provide support for many species of fish.

28. At the 2002 World Summit on Sustainable Development, the international community committed itself to maintaining and restoring fish stocks to levels that can produce the maximum sustainable yield with the aim of achieving sustainable fisheries by 2015. Sustainable fisheries development can only be achieved through responsible fishing, with fishery management objectives that address such issues as the status of the resource, the health of the environment, the impact of fishing practices and methods on associated and dependent species and marine ecosystems, the importance of economic and social factors and the legal and administrative framework.

29. **States**: several States indicated that they have adopted fisheries policies and legislation for the long-term conservation and sustainable use of marine living resources in areas under their jurisdiction,[7] and for cooperation with other States in the conservation and management of shared stocks or high seas fish stocks, either directly or through RFMOs.[8] The Philippines has undertaken projects on coastal fisheries management with the assistance of regional and global financial institutions. New Zealand indicated that major domestic commercial fisheries are managed through a quota management system based on individual transferable quotas, allowing fishing authorities to set sustainable catch limits for each stock and manage fisheries within those limits. The New Zealand Fisheries Act of 1996 establishes that total allowable catches (TACs) are always set at or above a level that can produce the maximum sustainable yield, having regard to the interdependence of stocks. Other countries have taken remedial actions to prevent overfishing and rebuild overfished stocks (United States, Magnuson-Stevens Fishery Conservation and Management Act), including stock assessment (Kuwait), the strengthening of monitoring, control and surveillance in EEZs, control of landings, establishment of marine reserves, temporary prohibition of fishing for some species, management of fishing capacity, establishment of closed seasons and areas, gear restrictions (Morocco) and imposition of penalties for violations of fishing regulations (Saudi Arabia).

30. **Regional fisheries management organizations**: several RFMOs have adopted measures to ensure the long-term conservation and sustainable use of fishery resources under their competence. Such measures include multi-year management plans (ICCAT) and management schemes providing for TACs, quotas, closed seasons and areas, fishing moratoriums for some stocks, by-catch and gear requirements, mandatory VMS, full observer coverage, inspection and surveillance schemes at sea and in ports, special measures for new fisheries and threatened stocks and a non-contracting party scheme (NAFO). NAFO reported that it has also introduced product labelling requirements. NASCO has initiated rebuilding programmes for stocks below their conservation limits. SPC is in the process of improving knowledge about the status of fish stocks and ecosystems and the social and economic aspects of fishing to determine the restoration benchmarks for various species. The International Pacific Halibut Commission (IPHC) reported that it had not taken measures to implement the Plan of Implementation of the World Summit on Sustainable Development (Johannesburg Plan of Implementation) because fishery resources under its management were not depleted and, in some cases, were at a near record level of abundance. CCAMLR stressed in its report that since its establishment in 1982, it had worked on all the issues raised in the Johannesburg Plan of Implementation, and did not therefore need to adopt additional measures.

## A. New tools to enhance sustainable fisheries

31. A number of international fishery instruments, adopted after the 1992 United Nations Conference on Environment and Development, have introduced new management tools to enhance sustainable fisheries, in addition to those already used in fisheries management. In this regard, the precautionary and the ecosystem approaches, the application of which is recommended by both the FAO Code of Conduct and the Agreement, to enhance the long-term conservation and sustainable use of all marine living resources are of particular importance.[9] FAO has developed

two Technical Guidelines for Responsible Fisheries, which are intended to help all stakeholders to apply the two approaches.[10] However, for various reasons, the precautionary and ecosystem approaches have not yet been fully implemented by all stakeholders. Consequently, in resolution 59/25, the General Assembly once again urged the international community to widely apply the precautionary and the ecosystem approaches to the conservation, management and exploitation of fish stocks, including straddling fish stocks and highly migratory fish stocks, as a matter of priority.

32. **States**: a number of States reported that their conservation and management measures provide for the application of the precautionary approach.[11] Parties to the Agreement, EC, New Zealand, the United States and the United Kingdom, reported that they had established domestic legislation and policies to implement the provisions of article 6. New Zealand requires all management decisions to take into account the best scientific evidence available and any uncertain, unreliable or inadequate information available at the time of decision-making, without allowing the absence or uncertainty of information to be used as a reason for postponing or refraining from taking the necessary measures. United States legislation provides for mandatory identification and rebuilding of overfished stocks, prohibition of the use of any fishing gear not placed on an approved list and the collection of fisheries data. EC has adopted conservation and management measures within the precautionary framework established by the International Council for the Exploration of the Sea (ICES), including scientific advice based on the use of limit reference points and target reference points.[12] The United Kingdom uses other sources of scientific advice for the same purpose.

33. EC, Myanmar, New Zealand, Portugal, the Philippines, Qatar and the United States reported that they had initiated implementation of the ecosystem approach to fisheries management. Consequently, they have adopted fisheries legislation incorporating strong environmental obligations (Pakistan), which include the application of an ecosystem approach in the annual process of making fisheries management decisions on catch limits and fishing practices, taking into account the impact of fishing on ecosystems (New Zealand), control of fishing capacity and protection of juveniles, associated and dependent species, marine biodiversity and fish habitats, through the introduction of such technical measures as closed seasons and gear restrictions (Kuwait). EC stated that it was applying ecosystem considerations in the management of fisheries in the North and Baltic Seas and had requested ICES to provide it with scientific advice on the basis of ecosystem considerations and technical interactions in mixed fisheries. Croatia, EC, Morocco, Myanmar, the United States and the United Kingdom reported that they were conducting or were about to conduct (Saudi Arabia) scientific research and studies to improve the knowledge basis for an implementation of the ecosystem approach, including collection of information for the development of strong indicators of the status of ecosystems, and the establishment of an integrated and comprehensive ocean observation system to allow interpretation of information about fishery resources, marine biodiversity and ecosystems, and other information relevant to the implementation of an ecosystem approach to fisheries management (United States and Morocco). Several States reported that they were in the process of developing a draft fisheries law incorporating ecosystem considerations into fisheries management (for example, Morocco), a strategy for managing the environmental effects of fishing activities (New Zealand), or a set of guidelines for the

implementation of the ecosystem approach in all anthropogenic activities in the marine environment, including fishing activities (EC and the United States).

34. Despite an apparent willingness to apply the precautionary and ecosystem approaches to fisheries management, the lack of financial and technical capacity can be a major impediment for many States, in particular developing States. Therefore, capacity-building assistance is necessary to broaden application of the precautionary and ecosystem approaches in fisheries management.

35. **RFMOs**: CCAMLR, CPPS, IATTC, IPHC, NAFO, NASCO and NEAFC already apply the precautionary approach to the management of fish stocks falling under their respective competence. The related measures that they have taken include: collecting and analysing data on target and dependent/related species and analysing the extent and effect of uncertainties and gaps in such data before making management decisions; limiting fleet capacity at a precautionary level; establishing agreements, action plans and guidelines for the precautionary approach; adopting precautionary quotas; and requesting scientific advice on precautionary buffer zones for reference levels. The precautionary approach is also an essential element in the management regime of the International Whaling Commission. The Fishery Committee for the Eastern Central Atlantic (CECAF), an FAO fishery body with advisory functions, regularly recommends to its member States the application of the precautionary approach to the management of fishery resources, including advising them to monitor the total level of exploitation throughout the year to ensure that it does not exceed the mean level for the preceding three years. The South Pacific Forum Fisheries Agency (FFA), NAFO and SPC are in the process of implementing the precautionary approach and the Western Central Atlantic Fishery Commission (WECAFC) is recommending implementation of the approach to its member States. In 1997, ICCAT established an ad hoc working group on the precautionary approach in order to develop a document on the meaning of the "precautionary approach" in the context of ICCAT stocks.

36. In contrast, application of the ecosystem approach to fisheries (EAF), with its many implications for fisheries management, seems to be proceeding slowly in most RFMOs, most probably because RFMOs are mandated by their respective conventions or agreements to conserve and manage only the target fish species under their competence, although they routinely adopt regulations to minimize by-catch of other species associated with target stocks. Some of the issues involved in incorporating ecosystem considerations into fisheries management include: (a) problems of reconciling conflicting objectives in the management of different species; (b) the wide variety of approaches and the need for workable objectives essentially based on a common sense approach; (c) the value of stakeholder involvement in various contexts, including marine protected areas; (d) the importance of applying principles of equity in ensuring that equal account is taken of all relevant concerns pertaining to EAF; (e) the parallel between the sustainable livelihoods approach and EAF; and (f) the need to take marine mammals and seabirds into account as species dependent on the harvested stocks.[13]

37. Nonetheless, CCAMLR, IATTC, IPHC, NASCO, NEAFC and CPPS have incorporated the ecosystem approach into conservation and management of marine living resources in their convention areas. Both CECAF and WECAFC have recommended the application of EAF to their respective member States. Other RFMOs reported moving in that direction. SPC and FFA are endeavouring to

promote the implementation of EAF in the Pacific region. OLDEPESCA reported that in 2004 it established a working group to develop a regional plan of action for EAF. The ecosystem approach guides all work by CCAMLR. In 2003, IATTC modified its convention to include implementation of the precautionary approach and the ecosystem approach. In the application of EAF, in 2004, NEAFC closed to fishing activities five seamounts on the high seas in order to protect vulnerable deep water habitats.

38. RFMOs that did not submit a response for this report but are known to apply the precautionary and ecosystem approaches in their management regimes include: the Indian Ocean Tuna Commission, the Commission for Conservation of Southern Bluefin Tuna, the General Fisheries Commission for the Mediterranean and the newest RFMOs: the South East Atlantic Fisheries Organization (SEAFO) and the Western and Central Pacific Fisheries Commission (WCPFC).[14]

## B. Towards sustainable aquaculture

39. As aquaculture has expanded in recent years its importance has been recognized as a means of increasing fish production, generating income and reducing pressure on wild fish resources. Aquaculture is perceived as an engine for economic growth and for achieving diverse societal and environmental goals. However, in order to achieve sustainable development, aquaculture must be adequately regulated and protected by effective legal and administrative frameworks.[15] An important aspect of regulation is effective health management control, as disease has become a primary constraint to the growth of aquaculture. Furthermore, intensive aquaculture practices, with poorly controlled use of feed and production of waste, have adversely affected local environments. Consequently, better husbandry practices are needed to protect water quality, which is essential for optimum health and production in aquaculture.

40. The Food and Agriculture Organization of the United Nations Code of Conduct is having a significant influence on aquaculture development. As stated above, FAO has developed a set of technical guidelines for Responsible Fisheries to promote good management policies and practices, addressing aquaculture health management, feeding and food safety, environmental management and the planning of aquaculture development, safe and effective use of chemicals and the sustainable integration of aquaculture and agriculture.[16]

41. Given the growing importance of aquaculture and the need to develop standards and guidelines for good management practices to ensure its sustainable development, the General Assembly, in paragraph 65 of its resolution 59/25, called upon States, FAO, other specialized agencies of the United Nations, RFMOs and other intergovernmental bodies to cooperate in information exchange and in developing equivalent standards for health hazards and other safety concerns, and in the assessment of the potential positive and negative impacts of aquaculture, including socio-economic impacts on the marine and coastal environment, including biodiversity, with a view to adopting relevant methods and techniques to minimize and mitigate adverse effects.

42. **States**: several States reported that they had a legal framework in place to regulate the development of sustainable aquaculture.[17] The United States indicated that it was in the process of establishing a regulatory regime for sustainable

mariculture in the EEZ and that it was implementing the Code of Conduct, as well as the Bangkok Declaration and Strategy for Aquaculture Development beyond 2000. EC and Croatia reported that they routinely participated in regional and global forums aimed at promoting sustainable aquaculture. Croatia has adopted guidelines for sustainable aquaculture development and best practices and procedures for risk assessment, feed management strategies, food safety and sustainable stocking. France conducts scientific research on animal diseases and on ways to reduce the use of antibiotics. It also reported on measures it had taken to promote sustainable aquaculture in support of producer organizations and fish farmers. Morocco reported that it regularly conducted environmental assessments of aquaculture operations, monitored operations and taken measures to minimize harmful effects of alien species introductions.

43. A number of States reported that they were cooperating at the bilateral (Myanmar, the Philippines and Qatar) as well as the multilateral levels (Myanmar, Saudi Arabia and the United States) in their own regions in order to enhance sustainable aquaculture. In that regard, the United States informed that it was supporting a "network of aquaculture expertise for the Americas", in cooperation with FAO and the APEC Fisheries Working Group and interested States in the region.

44. FAO reported that it was assisting member States and relevant stakeholders in the implementation of appropriate provisions of the Code of Conduct, with a view to helping them achieve sustainable marine and brackish aquaculture. That work includes promoting sustainable use of fisheries resources, reducing environmental and biodiversity impacts from aquaculture, analysing and reporting on trends in aquaculture development and assisting in decision-making for the sustainable development of aquaculture. Activities are generally conducted through close cooperation with a variety of national bodies, intergovernmental organizations, FAO statutory bodies, non-governmental organizations and other international institutions, including APEC, CBD, CITES, GESAMP, ICES, NACA, OIE, OSPESCA, SEAFDEC, WFC, the World Bank and WWF.

45. FAO is actively supporting the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) Working Group on Environmental Risk Assessment and Communication in Coastal Aquaculture and the ICES Working Group on Environmental Interactions (Risk Analysis) of Mariculture. It is working on improving management of shrimp aquaculture, under a consortium programme with the Network of Aquaculture Centres in Asia and the Pacific (NACA), the World Bank and the World Wide Fund for Nature (WWF). The most recent cooperation between FAO and NACA included the organization in 2000 of the International Conference on Aquaculture in the Third Millennium and the proposed global review on aquaculture development in 2005. FAO and APEC are working to establish a NACA-type mechanism in the Americas as a means of promoting sustainable aquaculture development. FAO is also working with CBD and ICES on the safe and responsible movement of aquatic species, and with OIE to set up guidelines and standards on aquatic animal health in support of compliance with the Agreement on the Application of Sanitary and Phytosanitary Measures of the World Trade Organization and to provide national and regional capacity-building.

46. In addition, FAO is developing scientific publications, guidelines and technical procedures for responsible fish stock enhancement, in cooperation with scientific institutions in the United Kingdom, Japan and resource agencies in the Caspian Sea. Studies cover the food security and poverty alleviation implications of using fishery products, the sustainable use of fishery resources (seed) for aquaculture and the importance of environmental impact assessment and monitoring procedures in aquaculture. Those publications will provide vital information for improving sustainability of brackish water and marine aquaculture worldwide.

47. **Other competent bodies**: aquaculture is relevant to the mandate of NASCO, which has adopted measures to minimize impacts on wild salmon stocks from the introduction and transfer of transgenics from aquaculture. It is cooperating with the North Atlantic farming industry on issues of mutual interest and with ICES in order to convene a major international symposium entitled "interactions between aquaculture and wild stocks of Atlantic salmon and other diadromous fish species: science and management, challenges and solutions". One of the objectives of the symposium is to make recommendations regarding additional measures in the management of such interactions, including cooperative ventures between various stakeholders, to ensure that aquaculture practices are sustainable and consistent with the precautionary approach.

48. The United Nations Development Programme (UNDP), through its Global Environment Facility (GEF) Yellow Sea Large Marine Ecosystem (YSLME) project, Benguela Current Large Marine Ecosystem (BCLME) project and Black Sea Ecosystem Recovery Project (BSERP), in Asia, Africa and Europe, respectively, is undertaking or is about to undertake activities to promote sustainable aquaculture.

## C. Towards ensuring the conservation and management of sharks

49. The International Plan of Action for the Conservation and Management of Sharks (IPOA-Sharks) has been developed to address widespread concern over the increase in shark fishing and its consequences for the populations of certain shark species. The goal of IPOA-Sharks is to control directed shark fisheries and fisheries in which sharks constitute a significant by-catch to ensure the conservation and management of sharks and their long-term sustainable use. To that end, States are invited to adopt national plans of action for the conservation and management of shark stocks if their vessels conduct directed fisheries for sharks or if their vessels regularly catch sharks in non-directed fisheries. National plans should contain an assessment of the prevailing state of shark stocks and populations, associated fisheries and management frameworks and their enforcement, and strategies for achieving the objective of IPOA-Sharks, including: controlling access of fishing vessels to shark stocks; decreasing fishing effort for any stock where the catch is unsustainable; improving the utilization of sharks caught; improving data collection and the monitoring of shark species; providing training in identification of shark species; facilitating and encouraging research on little known shark species; and obtaining utilization and trade data on shark species.

50. According to FAO, only about 30 per cent of States replying to a survey reported having made an assessment of the need for a national plan and only one in three, about 11 per cent, have actually developed and implemented IPOA-Sharks.

These results indicate that more progress is needed in the implementation of the Plan.[18] In its resolution 59/25, the General Assembly called on States to fully implement IPOA-Sharks and, where directed and non-directed fisheries have a significant impact on vulnerable or threatened shark stocks, to ban directed shark fisheries for the sole purpose of harvesting shark fins and to minimize discards of shark catches by encouraging the full use of dead sharks.

51. **States**: the United States and the United Kingdom reported that they have adopted national plans of action for the conservation and management of sharks. The United States has banned the practice of shark finning in areas under its jurisdiction and by its nationals.[19] The United States has initiated training opportunities and policy dialogues within APEC concerning shark conservation and management and is working with other partners to disseminate the manual, *Elasmobranch Fisheries Management Techniques*,[20] which is aimed at assisting developing countries in the preparation of national shark fisheries management plans. The United Kingdom indicated that some territories have already collected catch statistics for sharks, although they have not yet introduced specific conservation and management measures for the species. The United Kingdom stressed that there are no direct shark fisheries in maritime areas under its jurisdiction, and that it does not support shark finning or other destructive practices, as a matter of policy.

52. Croatia, European Community, Myanmar, New Zealand, the Philippines and Serbia and Montenegro indicated that they have not yet adopted any national plans of action to conserve and manage sharks, although EC, New Zealand and the Philippines intend to do so in the near future. Both EC and New Zealand have legislation in line with IPOA-Sharks, EC stated that many rules in its Common Fisheries Policy are in accordance with IPOA-Sharks, including monitoring of catches; collection of scientific data on shark catches, including fishing efforts, landings and discards, biological parameters, scientific surveys and prices at the first sale, as minimum data requirements; conduct of specific research on shark biology and exploitation; adoption of catch limitations for a number of species in the Community EEZ; and prohibition of shark fisheries for the sole purpose of selling shark fins. Portugal requires that fishers who separate shark fins on board keep the remaining parts of the shark, in accordance with Community legislation. In the Philippines, the National Fisheries Research and Development Institute routinely collects scientific data regarding shark catches and the authorities are considering the banning of shark fisheries under the so-to-be adopted national plan of action. New Zealand indicated that some species of sharks are already under its Quota Management System, which makes their reporting mandatory. Myanmar stated that shark fisheries are prohibited in maritime areas under its jurisdiction and that, since May 2004, it has already declared two shark fishing protected areas. Pakistan reported that it had no direct shark fisheries in its waters and that sharks caught by other fisheries are fully utilized. Others stated that they do not have any shark fisheries, but collect scientific data on sharks (Croatia, Kuwait, Qatar and Saudi Arabia), and/or are involved in conservation measures on the advice of the competent RFMO (Cambodia and Kuwait). Morocco and Qatar encourage the full use of dead sharks taken as incidental catch and Qatar prohibits the export of sharks or any part thereof, such as shark fins.

53. FAO reported that in 2004 it had not received any requests for assistance in the implementation of IPOA-Sharks. It pointed out that in order to assist developing

countries with management of elasmobranch resources, it is necessary that these countries have sufficient financial and technical resources dedicated to the task. Most countries have few, if any, existing elasmobranch management activities on which to build programmes of assistance. Nonetheless, FAO has undertaken a number of activities that could benefit the conservation and management of sharks. In cooperation with APEC, it is publishing a study on elasmobranch fisheries management techniques to facilitate national management initiatives at the operational level. It is also developing a revised and expanded version of the catalogue "Sharks of the World" and a catalogue of batoids of the world (skates and rays). It is mapping elasmobranch distribution and preparing a digital archive of shark and ray illustrations and pamphlets.

54. With regard to the preparation of the study referred to in General Assembly resolutions 58/14 and 59/25, FAO indicated that it had not taken any step to update the study. This would be a major undertaking and it is not included in the FAO programme of work and budget, nor have funds been sought to support the work.

55. **RFMOs**: most RFMOs providing information indicated that they had made efforts to implement IPOA-Sharks,[21] although they do not have a regional plan of implementation. Measures include releasing shark by-catch alive (CCAMLR, IATTC and ICCAT), distributing publicity materials to fishing vessel operators, providing advice in the formulation of management plans (CECAF), collecting by-catch data on sharks (ICCAT, IPHC and NAFO), adopting resolutions on shark fisheries that promote the full use of dead sharks, encouraging the implementation of national plans of action (ICCAT), and assessing shark populations (IATTC and ICCAT). NAFO announced that it is now regulating the conservation and management of the elasmobranch skates through TAC and quotas, thus becoming the first RFMO to manage an elasmobranch. Some RFMOs that had not taken measures indicated that they would do so in the near future (CPPS), that shark by-catch was not a problem in their convention areas (NASCO) or that insufficient resources and a lack of interest on the part of members had prevented them from doing so. Members of SPC consider that current shark catch or by-catch levels in their region are sustainable, while other fisheries are considered to be unsustainable and in need of more attention.

56. **Other competent bodies**: the UNDP/GEF YSLME Programme has initiated activities associated with the conservation and management of sharks, including assessment of the status of commercially important stocks, quantification of carrying capacity, maximum sustainable yield for fisheries and the development of mechanisms for regular assessments and the protection of vulnerable and endangered species. Such mechanisms will be implemented by the adoption of best practice measures. The UNDP/GEF BCLME is currently gathering baseline data on the capture of pelagic sharks by tuna longline fishing vessels in maritime areas under its purview as a first step towards assessing the severity of the problem. Follow-up recommendations will subsequently be made to mitigate the impacts of longlining on sharks. In addition, because bronze whaler sharks migrate between Angola and Namibia, their joint management by the two countries is currently being implemented through the programme.

57. CITES reports that several shark species have been included in the Convention's appendices and additional species may be proposed for inclusion at the fourteenth session of the Conference of Parties in 2007. Previous CITES

Conferences have adopted a number of resolutions on the conservation and management of sharks and CITES has convened a workshop on the topic.

58. Since 2002, the Southeast Asian Fisheries Development Center (SEAFDEC) has implemented a regional programme on the management of fisheries and the utilization of sharks in South-East Asia. The programme involves a regional study on the implementation of the IPOA-Sharks and includes the collection of data and information at the national level on the status of shark resources and their utilization. All members have reaffirmed their intention to develop a national plan of action on sharks in 2005 and the programme will support them in the formulation and implementation of their national plans.

59. **Non-governmental organizations**: a number of non-governmental organizations have initiated activities in various forums to promote the conservation and management of sharks, in accordance with the IPOA-Sharks. WWF has worked with ICCAT and NAFO as well as CITES to promote the adoption of measures related to sharks. In its assessment of RFMOs, WWF is gathering data on measures taken by these organizations and arrangements to conserve and manage sharks.

## IV. Actions to address impediments to sustainable fisheries

60. Overexploitation of many fish stocks worldwide, excess fishing capacity, excessive by-catch and discards, IUU fishing and the use of destructive fishing practices continue to be of grave concern to the international community. In its resolution 59/25, the General Assembly requested States, RFMOs, competent intergovernmental organizations and other stakeholders to address these fishing practices considered to have a major impact on the conservation and sustainable use of marine fisheries and the marine ecosystem as a whole, as well as issues such as marine debris; the continued use of drift-nets; and the potential adverse impacts of destructive fishing practices, including bottom-trawling that has adverse impacts on vulnerable marine ecosystems.

### A. Illegal, unreported and unregulated fishing

61. UNCLOS, the United Nations Fish Stocks Agreement, the Compliance Agreement and the Food and Agriculture Organization of the United Nations Code of Conduct provide the legal and practical framework for States to control their nationals or vessels flying their flag in order to ensure the proper conservation and sustainable use of high seas fishery resources. IPOA-IUU provides a toolbox of actions and measures needed for the implementation of these international instruments in order to prevent, deter and eliminate IUU fishing.

62. **States**: several States (Kuwait, Morocco, Myanmar, New Zealand, the Philippines, Saudi Arabia and the United States) reported that they had developed policies and strategies to address IUU fishing. EC, New Zealand, the United Kingdom and the United States indicated that they had already adopted an NPOA-IUU. States that have developed policies stated that these are often included in their fisheries laws and regulations or that IUU fishing is often addressed as an integral part of their national fisheries policy. Other States indicated that their policies were being revised in order to conform to their obligations under international law, taking

into account the need for harmonization at the regional level through relevant RFMOs. Several States (Kuwait, Morocco, Myanmar, New Zealand, Pakistan, Saudi Arabia and the United States) have carried out awareness campaigns through Government agencies or stakeholder organizations to fully inform their nationals of the negative impacts of IUU fishing, some pointing out that their nationals commit an offence under their domestic legislation if they violate fishery laws and regulations of other States (Cambodia, Morocco, Myanmar, New Zealand, Pakistan and the United States) or if they are found undermining conservation and management measures of RFMOs (Morocco, Myanmar, New Zealand, Pakistan, the United States and Venezuela (Bolivarian Republic of)). Some States actively discourage nationals intending to register fishing vessels in non-member States identified by RFMOs as undermining their conservation and management measures (Kuwait, Myanmar, New Zealand and Venezuela (Bolivarian Republic of)). New Zealand, under its Fisheries Act 1996, has prohibited its nationals from using a vessel to take or transport fish on the high seas unless the vessel is flying the flag of a "responsible" State. Spain, under Royal Decree No. 1134/2002, has imposed penalties on its nationals working onboard vessels flying flags of non-compliance. EC and the United States have joined the International Monitoring, Control and Surveillance Network (MCS Network), while Pakistan expects to do so in the near future. Many States expressed support for measures to deter reflagging of vessels identified as engaging in IUU fishing, as well as for initiatives to promote responsible registry practices. Some States emphasized that there was no legal basis for restricting the reflagging of vessels operating in compliance with the applicable regulatory framework adopted at the international or national level (EC), or in cases where a genuine link exists (New Zealand).

63. **Flag States**: many flag States (EC member States, El Salvador, Morocco, Myanmar, New Zealand, Pakistan, the United Kingdom, the United States and Venezuela (Bolivarian Republic of)) reported that their domestic legislation requires registration of commercial fishing vessels flying their flag. The Bolivarian Republic of Venezuela and Morocco are undertaking a programme of registration applicable to their artisanal fleet. The Philippines is in the process of revising its legislation to include a registration requirement. Other respondents indicated that they maintain a record of fishing vessels (EC, Morocco, Myanmar, New Zealand, Pakistan, the United States and Venezuela (Bolivarian Republic of)). Several respondents stressed that under their fishery laws and regulations, all their vessels intending to fish within areas under their national jurisdiction (EC, El Salvador, Kuwait, Morocco, Myanmar, New Zealand, Pakistan, Portugal, Saudi Arabia, the United States and Venezuela (Bolivarian Republic of)) or on the high seas (EC, El Salvador, Morocco, New Zealand, Portugal, Saudi Arabia, the United Kingdom, the United States and Venezuela (Bolivarian Republic of)) are required to have express authorization before doing so. This requirement for authorization can also prevent the operation of substandard fishing vessels. In addition, several States have taken measures to prevent unauthorized fishing in areas under the national jurisdiction of other States (EC member States, New Zealand, Pakistan and the United States), and some have concluded mutual enforcement agreements with other States to support their domestic legislation addressing the issue.[22] For example, EC indicates that fishing anywhere without a licence, permit or other required authorization is a serious infringement of the rules of the Common Fisheries Policy.[23] The United States reported that under the Lacey Act amendments of 1981 it is a violation of United

States law for persons subject to United States jurisdiction to conduct fishing operations in violation of foreign law.

64. Most States providing information on this topic reported that they exercise effective control over the fishing activities of vessels flying their flag (Kuwait, Morocco, Myanmar, New Zealand, Pakistan, the United States and Venezuela (Bolivarian Republic of)), while some (Cambodia, Croatia and the Philippines) declared that they are taking measures to improve such control. Those which exercise control over vessels on the high seas indicated that they either prohibit trans-shipment at sea (EC, Morocco, Myanmar, Pakistan and the United States) or require close monitoring or prior authorization for this practice (El Salvador, New Zealand and Pakistan), in order to prevent the sale of fish caught illegally on the high seas. For instance, countries such as Morocco and Pakistan have established a comprehensive system of monitoring and control of fishing vessels through the mandatory installation of Global Positioning System (GPS) guidance equipment on each vessel, which allow constant monitoring of their activities. Several States emphasized that measures such as the compulsory use of VMS and observers ensured that vessels flying their flag did not undermine high seas conservation and management measures (France, New Zealand, Pakistan, Portugal, Saudi Arabia, the United Kingdom, the United States and Venezuela (Bolivarian Republic of)), and that they were improving their monitoring, control and surveillance (Morocco, Myanmar, New Zealand, Pakistan, the United States and Venezuela (Bolivarian Republic of)). Cambodia, Kuwait, Morocco, New Zealand and the United States indicated that their legislation provides for severe penalties for IUU fishing violations. Finally, a number of flag States stated that they were complying with their obligations to submit high seas catch data on a timely basis to FAO (New Zealand, Pakistan, Saudi Arabia and the United States).

65. **Port States**: New Zealand requires foreign fishing vessels to provide advance notice of their wish to enter port prior to allowing port access. Several States carry out inspections when fishing vessels are docked in their ports or at offshore terminals (Kuwait, Morocco, New Zealand, Pakistan, Portugal, the United Kingdom and the United States),[24] while others reported that, should inspections establish that IUU fishing violations have been committed, landings and trans-shipments of catches are prohibited (Kuwait, Myanmar, New Zealand, Portugal, the United States and Venezuela (Bolivarian Republic of)), and violations are reported to the flag State of the vessel and the RFMO or to the coastal State where the fishing took place (Kuwait, Morocco, Myanmar, New Zealand, Pakistan, the United States and Venezuela (Bolivarian Republic of)). Several respondents agreed that enhanced port State control through cooperation among States at the regional level (Cambodia, Kuwait and Pakistan) and a model scheme on port State measures (EC, France and Pakistan) would be important in combating IUU fishing.

66. **Internationally agreed market-related measures**: France, Morocco, Myanmar, New Zealand, Pakistan, the United Kingdom and the United States indicated that they have cooperated under the auspices of the relevant RFMO to develop and implement internationally agreed market-related measures aimed at combating IUU fishing. However, only a few countries such as Kuwait, Morocco, New Zealand and the United States have domestic legislation that prohibits nationals from conducting business with entities engaged in or supporting IUU fishing.

67. FAO has undertaken many activities to promote the Code of Conduct and the related IPOAs since their adoption in 1999 and 2001. In 2002, FAO prepared and published technical guidelines to support implementation of IPOA-IUU[25] and in 2003, it convened an expert consultation on fishing vessels operating under open registries and their impact on illegal, unreported and unregulated fishing. In 2004, FAO convened two technical consultations for the implementation of IPOA-IUU: the Technical Consultation to Review Progress and Promote the Full Implementation of IPOA-IUU and IPOA-Capacity and the Technical Consultation to Address Substantive Issues Relating to the Role of the Port State to Prevent, Deter, and Eliminate IUU Fishing. The latter approved a model scheme on port State measures to combat IUU fishing.

68. While the 2005 session of the FAO Committee on Fisheries endorsed the recommendations of the technical consultations to review IPOA-IUU and IPOA-Capacity, it agreed that follow-up work had to be undertaken on the technical consultation to review port State measures on IUU fishing, especially with respect to operationalizing the model scheme agreed upon at the technical consultation. In addition, in view of the importance of the issue for IUU fishing, the Committee requested FAO to participate in inter-agency activities to study the role of the "genuine link".[26]

69. FAO believes that the most effective means of eliminating IUU fishing is to focus on ways to deny the owners and operators of IUU fishing vessels any financial reward. The implementation of port State measures to prevent IUU fishing vessels from having access to ports to take on provisions and to offload catches would assist in discouraging IUU fishing. Similarly, the implementation of internationally agreed market measures that would prevent or at least make the sale of such fish more difficult should decrease the expected financial returns from IUU fishing, leading to its reduction. Therefore, the establishment of lists of IUU fishing vessels and their wide international dissemination through closer collaboration among RFMOs should be encouraged as a means of combating IUU fishing.

70. **RFMOs**: most RFMOs have adopted measures to implement IPOA-IUU. These include: prohibiting fishing except in accordance with conservation and management measures; advance notification of new and exploratory fisheries; reporting catch, effort and biological data; placing international scientific observers on board vessels and port State measures (for example, CCAMLR). Flag State measures include: licensing and inspection obligations; at-sea inspections; marking of fishing vessels and gear; compulsory use of VMS; and catch documentation or certification schemes (CCAMLR, FFA, IATTC and ICCAT). RFMOs have also adopted schemes to promote compliance both by contracting parties and non-contracting parties (CCAMLR, IATTC, ICCAT, NAFO and NEAFC); lists or registers of vessels authorized to fish or prohibited from fishing in the regulatory area (FFA, IATTC and ICCAT); regional plans of action to combat IUU fishing (ICCAT); joint cooperative enforcement (NPAFC); and trade restriction measures (ICCAT).

71. **Other competent bodies**: several concerned organizations have undertaken varied activities to combat IUU fishing and its adverse effects. The World Conservation Union (IUCN) has denounced IUU fishing in various international forums, placing special emphasis on the issue of unregulated high seas fishing. IUCN believes that since there is a gap in the coverage of many RFMOs, in terms of

geographical, mandate or species coverage, States should apply precautionary measures including data collection and reporting for unregulated fisheries, implementation of flag State duties and port State control, regional cooperation in monitoring, control and surveillance and enforcement and use of trade-related measures. IUCN welcomes the recently developed FAO model scheme on port State measures to combat IUU fishing.

72. SEAFDEC has developed activities to increase awareness among owners and operators of fishing vessels, targeted, in particular, at changing attitudes of fishers to comply with responsible fisheries concepts and principles. Although IUU fishing in a tropical small-scale fisheries context such as South-East Asia is very difficult to address, SEAFDEC is trying to improve existing management frameworks and practices to fill the loopholes of current management schemes in the region and to improve data and information collection with a view to supporting more effective management. These initiatives have been promoted in close collaboration with FAO, in particular with its FishCode project, in order to implement the Strategy for Improving Information on Status and Trends of Capture Fisheries (Strategy-STF).

73. **Non-governmental organizations**: all non-governmental organizations agree that IUU fishing poses a major threat to the sustainability of the world's oceans and undermines major global efforts towards the conservation of marine living resources.[27] Consequently, they have undertaken activities and campaigns to raise the awareness of the international community about the danger of IUU fishing. The Antarctic and Southern Ocean Coalition has focused considerable efforts on the issue of illegal fishing for Patagonian and Antarctic toothfish in the Southern Ocean by gathering and disseminating information on illegal vessels, operators and beneficial owners and developing policy recommendations at the national, regional and global levels in order to eradicate illegal toothfish fishing and trade. Greenpeace has documented unregulated bottom-trawling activities of fishing vessels in the North-East Atlantic and the Tasman Sea. They all agree that strong, legally binding measures regulating industrial fishing are effective in the fight against IUU fishing. These include: emphasizing flag State duties; strengthening monitoring, control and surveillance measures; strict regulation of at-sea trans-shipments; adoption of a single, centralized and compatible VMS; introduction of international trade controls and certification schemes; wide application of positive and negative lists of vessels by RFMOs; transparency of fishing operations on the high seas; harmonization of the trade-related schemes of RFMOs; State control over nationals; strengthening of port State controls; action against non-complying flag States; and elimination of flags of convenience in the fisheries sector. Greenpeace proposed the establishment of a central monitoring, control and compliance authority for all vessels operating on the high seas that would be funded by States according to the number of vessels authorized by them to conduct fishing operations on the high seas.

## B. Fishing overcapacity

74. One of the causes of overfishing is overcapacity in the fishing industry, a situation where the harvesting capacity of the fleet exceeds the amount of resource available for harvest. Overcapacity is the result of rapid development without adequate scientific information on available yields from the resource[28] and of subsidies extended to the fisheries sector in the form of capital support for vessel purchases, fuel subsidies or related tax exemptions, cheap credit and others.

75. Experts define the capacity of a vessel or a fleet as its ability to generate fishing effort per period of time. For a fishing fleet, capacity has four components: number of vessels; size of each vessel; technical efficiency of vessel operation; and potential fishing time of each vessel, per specified period of time, for example, year or season.[29] Capacity would then refer to the maximum potential harvest that could be realized by fleets given maximum use of variable factors of production, such as fuel and labour, and the utilization of capital, such as vessel, engine, equipment, gear and other fixed factors.[30] Thus, fishing capacity would be the maximum amount of fish over a period of time that could be produced by a fishing fleet if fully utilized, given the biomass and age structure of the fish stock and the present state of the technology.[31]

76. Overcapacity is a typical characteristic of open access regimes, particularly those prevailing on the high seas. It is motivated by a "race for fish", which occurs because of inadequate rights based on allocation of shares of the fishery, uncertain scientific information and risk-prone decisions in the face of pressure to postpone economic and social hardships. While environmental factors have also adversely affected some fish stocks, excessive levels of fishing capacity are believed to be the primary cause of fisheries declines. Moreover, fishing overcapacity is also known to have contributed to the issue of IUU fishing, particularly in cases where excess capacity has been exported through reflagging to States operating "flags of non-compliance". Recognition of all these facts convinced the international community to adopt IPOA-Capacity in 1999 in order to manage fishing capacity.

77. IPOA-Capacity requires States, directly or through RFMOs, to undertake the following series of actions to address the issue of excess fishing capacity: (a) the conduct of national, regional and global assessments of capacity and improvement of the capability for monitoring fishing capacity; (b) the preparation and implementation of national plans to effectively manage fishing capacity and of immediate actions for coastal fisheries requiring urgent measures; (c) the strengthening of RFMOs and related mechanisms for improved management of fishing capacity at regional and global levels; and (d) immediate actions for major transboundary, straddling, migratory and high seas fisheries requiring urgent measures.[32] The most urgent actions are the assessment and monitoring of fishing capacity and the preparation and implementation of national plans.

78. **States**: Cambodia, EC, Portugal and the United States reported that they had assessed their fleet capacity and had taken action to address excess fishing capacity. In EU, capacity management is undertaken through the structural policy of the Common Fisheries Policy. While the policy has historically been concerned with modernizing the fleet through a subsidy programme, more recently it has been redesigned in the light of persistent problems of overexploitation of key stocks, with the introduction of a new effort-based system, including stringent regulations on vessel replacement and the entry of new vessels.[33] The new measures[34] are: (a) no further financial aid for the construction of new vessels; (b) capacity whose elimination has benefited from a financial intervention may not be replaced; and (c) the entry of new capacity into the fleet without public aid must be compensated by the withdrawal without public aid of at least the same amount of capacity. In Portugal, the exercise of fishing activities and the utilization of fishing gear and equipment are subject to annual authorization. Such authorization is granted only after due consideration of relevant factors, including the status of the resource, and the selectivity and amount of gear per vessel.

79. Other States have taken measures to improve management of national fishing capacity, in accordance with national or regional characteristics. European Community, Morocco, Saudi Arabia and the United States emphasized that their laws and regulations already prohibit overfishing and mandate the adoption of recovery measures for overfished stocks in areas under national jurisdiction. Morocco reported that it had implemented measures to control overcapacity, including the redirection of effort to underexploited fisheries. New Zealand and the United States reported that their fisheries laws also provide for the conservation and sustainable use of high seas fisheries. Morocco and Kuwait have frozen investments in the fishing sector and prohibited the issuance of new licences.

80. The Philippines is implementing a moratorium on the issuance of new commercial fishing vessel and gear licences as part of a precautionary approach to fisheries management. The United States has taken action to study the effect of federal subsidies and other Government programmes on levels of capacity in federally managed fisheries in order to determine the causes of overcapacity and to better understand the precise scope of the problem in United States fisheries and ways to correct it.

81. The United States indicated that it has completed its national plan of action for the management of fishing capacity (NPOA-Capacity). New Zealand indicated that it does not intend to develop a NPOA-Capacity because its fisheries are managed through a quota management system. It relies instead on output controls to ensure catches are kept within sustainable limits, under which quota holders are free to determine the appropriate level of capacity they require to harvest their quotas.

82. In addition to retiring existing vessels or restricting new entries in the fisheries, New Zealand has taken measures to control its fishing fleets in order to prevent the transfer of capacity to other fisheries. Other States have taken measures such as restrictive licensing (Pakistan), vessel and permit buybacks (EC), exclusive quota programmes or a combination of all those measures (United States). A number of States (Morocco, New Zealand, Pakistan, Serbia and Montenegro and Venezuela (Bolivarian Republic of)) indicated that they do not provide subsidies to their fishing sector. Saudi Arabia stated that it does not provide subsidies to fishermen who operate in an overfished area. Most States emphasized that no subsidies were allowed under their domestic legislation (for example, New Zealand, Pakistan, Portugal, the United Kingdom and the United States), as that could contribute to overcapacity and might encourage IUU fishing. Serbia and Montenegro stated that it provided reduced fuel price to fishing vessels, but it considers that not to be contributing to IUU fishing. New Zealand and the United States indicated that they were active participants in the ongoing negotiations at the World Trade Organization to clarify and improve disciplines on fisheries subsidies.

83. **FAO**: since the adoption of IPOA-Capacity in 1999, FAO has undertaken activities to promote the Plan and disseminate it widely, including the development of technical guidelines for its implementation, the convening of regional workshops on capacity management and the convening in 2004 of the above-mentioned Technical Consultation to Review Progress and Promote the Full Implementation of IPOA-IUU and IPOA-Capacity.

84. In March 2005, the FAO Ministerial Meeting on Fisheries adopted the Rome Declaration on Fisheries and the Tsunami, which urged countries not to export excess fishing capacity as part of the tsunami relief effort.[35]

85. RFMOs have an important role to play in the implementation of IPOA-Capacity. Many RFMOs emphasized that there are clear linkages between fleet overcapacity and IUU fishing, and also expressed their concern about the possibility of solving fishing overcapacity problems in one geographical area only to transfer them elsewhere.[13] Several RFMOs indicated that they have taken measures to implement the IPOA-Capacity in their regulatory areas, including restricting the number of vessels in new and exploratory fisheries (CCAMLR); fleet capacity limitation programmes; regional plans of action (IATTC); and adoption of resolutions to endorse IPOA-Capacity (ICCAT). FFA pointed out that the Palau Arrangement for the Management of Western Pacific Purse Seine Fishery imposes capacity limits on the purse seine fishery and that effort controls are currently being implemented for the longline fishery. In contrast, NASCO stressed that overcapacity is not a problem in relation to salmon fishing, because in recent years major reductions in commercial fishing effort have been implemented in the North-East Atlantic.

86. IPHC, NEAFC and SPC pointed out that management of fishing capacity is the responsibility of individual contracting parties. However, some RFMOs believe that the conservation measures they have adopted can have an impact on the management of fishing capacity. In that respect, NEAFC noted that the freeze on effort in fisheries for deep sea species in its regulatory area has had a direct effect on fishing capacity. NAFO stated that no measure is in place in its regulatory area to address fishing capacity.

87. **Other competent bodies**: the World Trade Organization reported that in negotiations under the mandate of the Doha work programme adopted at its Fourth Ministerial Conference, participants have not yet resolved the question of whether the primary focus of any new disciplines on fisheries subsidies should be on trade effects, environmental effects or both. While the participants seem to share the view that some new disciplines should be created, more precise questions of exactly which subsidies would be subject to any new disciplines, the exact nature of such disciplines and how to ensure that they would appropriately reflect the needs of developing States, remain under discussion.

88. Since the issue of overcapacity was identified in 2000 as a concern in South-East Asia, SEAFDEC has conducted a series of consultations to discuss the issues in a regional context. The use of rights-based fisheries and improvement of fishery licensing systems are identified as means for tackling overcapacity for small- and large-scale fisheries. Those measures are to be supplemented by the use of key indicators to allow fishery managers to monitor the status and trend of fisheries. The region has also adopted the "freezing of fishing vessels" as a general policy for the initial tackling of overcapacity.

## C. Fisheries by-catch and discards

89. A study by FAO has found that between 18 and 40 million tons of fish caught as by-catch are believed to be discarded annually, representing 20 per cent of the total annual marine harvest.[36] The significance of the waste arising from discarding has increased with the realization that the majority of world fisheries are either fully or overexploited and that discarded fish can serve as a valuable food source to

millions of people, particularly in developing countries where there is a high demand for protein.

90. By-catch of non-target species is a major problem for fisheries worldwide. Because marine ecosystems are multispecies in nature, by-catch occurs where fishing gear is not perfectly species or size selective and target species live in habitats occupied by a wide range of other species. Fishing will result in a combination of species being caught. In most cases, fishers will be primarily interested in catching only the target species and the unwanted catches of associated species will be subsequently discarded. Fish will also be discarded if they are the wrong sex, the wrong size, damaged or have no commercial value in their own right.[36]

91. All international fishery instruments require States to reduce by-catch and minimize the effects of fishing activities on dependent or associated species belonging to the same ecosystem. Articles 61 and 119 of UNCLOS provide that in taking measures to conserve and manage harvested stocks, States are under an obligation to take into consideration the effects of such measures on associated or dependent species. Both the Agreement (article 5, subpara. (f)) and the Code of Conduct (article 7.2) require States to minimize discards, catch by lost or abandoned gear and catch of non-target species in their fishing operations, and to develop and use selective, environmentally safe and cost-effective fishing gear and techniques for all fishing activities.

92. **States**: EC member States, Myanmar, New Zealand, Pakistan, Qatar, Serbia and Montenegro and the United States reported that they have taken technical measures to minimize catch of non-target species. Croatia, Morocco, New Zealand, the Philippines, Pakistan, Portugal, Saudi Arabia, Serbia and Montenegro, the United Kingdom and the United States have implemented mesh size limitations, a ban on landings of juveniles, gear restrictions, a minimum catch size and seasonal and area closures of fishing grounds to limit by-catch (juveniles, non-target species and non-fish species) and discards.[37] In Morocco and the United States, the permitted levels of by-catch and/or discards have been developed in consultation with the industry. Some States make use of tighter controls on fishing to limit by-catch and discards, including vessel restrictions for some areas (New Zealand and the United Kingdom); prohibition of discarding (New Zealand and Pakistan); fixed quota of by-catch (Croatia); and administrative penalties when the annual quota of by-catches exceeds the quota allowed under the TACs (New Zealand).

93. Some States have developed mechanisms for communicating information on areas of concentration of juvenile fish. For instance, EC is running a project still at the pilot scale in the southern North Sea to alert fishers to the location of juvenile fish, leading to a closure of the area to fishing. The United States is running an observer information programme that provides trawl fishing fleets operating off the north-west coast with accurate information on concentrations of juvenile fish. Morocco and the United Kingdom indicated that they have similar observer mechanisms operating in their countries. Croatia, EC member States, Kuwait, Myanmar, New Zealand, the Philippines, Portugal, Qatar, Saudi Arabia, Serbia and Montenegro and the United States indicated that they support studies and research aimed at reducing or eliminating the by-catch of juvenile fish. Some respondents reported that they are conducting research programmes specifically aimed at the

development of gear modifications to improve selectivity of gear (Kuwait, Myanmar and the United States) and to minimize cetacean mortality (EC and France).

94. Other States pointed out that they participate in subregional and regional organizations with mandates to conserve non-target species taken incidentally in fishing operations (the United States), such as the Convention on the Conservation of Migratory Species of Wild Animals (EC), the Agreement on the Conservation of Small Cetaceans in the Baltic and North Seas, the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area, the Agreement for the Conservation of Albatrosses and Petrels (France (in the process of ratification), New Zealand, Spain and the United Kingdom) and the Inter-American Convention for the Protection and Conservation of Sea Turtles and their Habitats (United States).

95. FAO has addressed by-catch through the development of a programme entitled "Impact of Fishing on the Environment", which is focused on the promotion of environmentally friendly fishing gear and the estimation of discard and by-catch rates. A methodology for the estimation of discard rates in fisheries has been developed, and updated figures on global discards were published in the 2004 edition of the *State of World Fisheries and Aquaculture 2004*.[15] FAO has also convened several workshops and training courses to promote the use of more selective fishing gear. A workshop was conducted in Bahrain for the Gulf region and, with GEF support, a series of workshops and courses for the promotion of by-catch reduction technologies in shrimp fisheries have been held in Cuba, Indonesia, Mexico, Nigeria, the Philippines and at SEAFDEC in Thailand. This work will continue with the development of appropriate training and information materials and with support to countries in the preparation of the necessary legal framework for the introduction of by-catch reduction technologies.

96. **RFMOs**: all RFMOs reporting on this topic stated that they had taken measures, or in the case of fishery bodies without managerial functions, have advised their member States, to reduce by-catches and discards (CCAMLR, FFA, IATTC, ICCAT, NAFO, NASCO, NEAFC and NPAFC). Those measures include catch limits for by-catch species (CCAMLR and NAFO), implementation of research on gears and technology to reduce by-catch (CCAMLR, IATTC, ICCAT and NASCO), application of individual quota management for fisheries to reduce wastage (IPHC), gear restrictions (CECAF, ICCAT and SPC), minimum fish sizes (CECAF and NAFO), collecting and reporting of data on by-catch and discards (CCAMLR and FFA), requiring the release of non-target species and policies of no dumping of target species (CCAMLR and IATTC), measures to protect sea turtles (IATTC) and time and area closures to reduce by-catches of juveniles or associated species (IATTC, ICCAT, IPHC and NEAFC). Some RFMOs have mechanisms, such as the preparation of studies (ICCAT and NAFO), reports or programmes within the fishing industry to inform fishers of concentrations of juvenile fish in the convention area (IPHC), while others are in the process of developing such mechanisms (IATTC).

97. SPC indicated that by-catch and discards are not a problem in artisanal fisheries in the Pacific islands, since all catches are consumed or used. That is not the case for industrial fisheries in the region, particularly foreign tuna vessels, which generate a large amount of by-catch. SPC is currently promoting the

development of by-catch-friendly fishing gear, including modifications to pelagic longline gear to reduce by-catch of marine turtles.

98. **Other competent bodies**: many fisheries projects funded by GEF address the issues of by-catch and discards, in cooperation with UNDP and the United Nations Environment Programme (UNEP). For example, an ecosystem analysis that will be conducted as part of the Pacific Islands Oceanic Fisheries Management Project will enhance information on the magnitude of by-catch in the region. One GEF initiative that specifically addresses destructive fishing techniques is its project on the reduction of the environmental impact from tropical shrimp trawling through the introduction of by-catch reduction technologies and change of management. The project is introducing more environmentally sound fishing technologies and practices in targeted countries in Latin America and the Caribbean, Africa and South-East Asia, and disseminating the successful results for implementation in each region. Ultimately, those technologies and practices are to be disseminated worldwide to contribute to a reduction in environmental stress from shrimp trawling in all marine areas.

99. UNDP/GEF large marine ecosystem projects, namely YSLME, BCLME and BSERP, have taken measures to address the issues of by-catch and discards in their respective areas of operation.

100. The YSLME project is aimed at reducing or eliminating by-catch, catch by lost or abandoned gear, fish discards and post-harvest losses through the use and implementation of best practice, technical measures, strengthening of regulatory mechanisms, development of communication for fisheries information and the development of a conservation framework for vulnerable or endangered species. The BCLME project is working closely with countries in the region to introduce strong domestic legislation for by-catch reduction. It is also addressing the issue of seabird, pelagic shark and turtle by-catch by proposing new longline technology. All projects are aimed at the reduction of by-catch of juvenile fish, focusing, along with other technical measures, on the establishment of marine-protected areas for spawning sites or nursery grounds. To that end, BSERP is undertaking an inventory of nursery and spawning grounds and mapping of marine habitats.

101. SEAFDEC has initiated a number of studies relating to the reduction of catch of endangered species, juvenile fish and trash fish. Countries in the region are now gradually adopting turtle excluder devices and juvenile and trash excluder devices. In addition, SEAFDEC is acting to reduce post-harvest losses through preparation of guidelines and the training of Government officials in fish handling techniques for small-scale and large-scale fisheries.

102. ACCOBAMS reported that it strictly regulates the use of acoustic harassment devices to alleviate conflicts between cetaceans and fisheries or mariculture operations in the agreement area. Due to the potential harmful effects of such devices on the conservation of cetaceans, it has recommended the use of "pingers"[38] to alert cetaceans to the existence of fishing gear in order to avoid entanglement. These devices are considered to be less invasive than acoustic harassment devices and they assist in cetacean conservation.

103. **Non-governmental organizations**: Greenpeace reported that it has been campaigning with EU States to take concrete measures to address the by-catch problem. In particular, it has been urging Governments to take action to close

fisheries identified as having unacceptable levels of cetacean by-catch. It has also gathered evidence in the English Channel and the North-East Atlantic on adverse impacts of trawl nets on marine biodiversity, including dolphins and porpoises.

104. WWF is engaged in global by-catch reduction initiatives with the goal of achieving a substantial reduction in by-catch, to allow for the recovery of species and the restoration and maintenance of marine ecosystem processes. They include a number of activities worldwide to promote the reduction or elimination of incidental catch of cetaceans, seabirds, marine turtles and sharks and juvenile fish in fishing operations.

105. ASOC stated that it remains concerned by the issue of seabird by-catch in longline fisheries in the Southern Ocean, a major aspect of its campaigns. Although some Governments have addressed the issue, and CCAMLR has adopted a series of mitigating measures that have significantly decreased seabird mortality in most legally conducted fishing activities, effective compliance with those measures by certain States fishing in the Southern Ocean remains an unresolved issue. For that reason, it has encouraged CCAMLR members to ratify the Agreement on the Conservation of Albatrosses and Petrels. As IUU fishing vessels continue to be the main cause of seabird mortality in the Southern Ocean, the campaigns by ASOC against IUU fishing for toothfish also constitute an effort to reduce incidental mortality of seabirds.

## D. Lost or abandoned gear and related marine debris

106. Marine debris,[39] also referred to as marine litter, is any persistent, manufactured or processed solid material discarded, disposed of or abandoned in the marine and coastal environment. Marine litter comes from both sea-based sources and land-based sources. The main sea-based sources of marine litter are: merchant shipping, ferries and cruise liners; fishing vessels; military fleets and research vessels; pleasure craft; offshore oil and gas platforms; and aquaculture installations. It is estimated that 30 per cent of all sea-based sources of marine litter originate from the fishing industry and that hundreds of thousands of tons of undegradable fishing nets are present in the world's oceans every year. Lost or abandoned gear has numerous adverse effects on fishery resources and marine biodiversity.[40]

107. **States**: several respondents (Croatia, Morocco, New Zealand, Pakistan, Philippines, Qatar, Saudi Arabia, the United States and Venezuela (Bolivarian Republic of)) reported that they have addressed or are in the process of addressing (EC, New Zealand and Pakistan) the issue of lost or abandoned fishing gear and related marine debris. Measures include the establishment of an "inter-agency marine debris coordinating committee" to allow consideration of the issue from all sectors and sources (the United States); funding of operators' initiatives to recover lost gears and compilation of all information required to initiate a programme of recovery of lost gear (EC); establishment of monitoring systems to collect data on gear loss, economic costs to fisheries and impact to other sectors and on marine ecosystems; and use of GPS to determine the location of traps (Pakistan). Certain respondents (Croatia, Morocco, New Zealand, Pakistan, Saudi Arabia, United Kingdom, the United States and Venezuela (Bolivarian Republic of)) indicated that they are parties to the International Convention for the Prevention of Pollution from Ships of 1973, as modified by the Protocol of 1978 (MARPOL 73/78) and its

annex V.[41] Other States have taken measures to implement the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, and other instruments aimed at abating pollution from land-based sources (EC (Directive 2000/60/EC), Kuwait, Morocco and New Zealand (Marine Transport Act 1994)). EC reported that it is a party to the Barcelona Convention for the Protection of the Mediterranean against Pollution, the 1992 Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area and the 1992 Convention for the Protection of the Marine Environment of the North-East Atlantic, all of which are aimed at reducing marine debris.

108. A number of States (Myanmar, New Zealand, Pakistan, the Philippines, Saudi Arabia, the United States and Venezuela (Bolivarian Republic of)) have adopted systems to retrieve lost gear and nets. In the United States, NOAA, in partnership with State authorities, federal agencies and private sector groups, has been removing derelict fishing gear from coral reefs and beaches in the North-Western Hawaiian islands. In New Zealand, regional councils are responsible for cleaning up gear washed ashore. Some States have legislation to reduce the abandonment of fishing gear by requiring the marking of gear and subjecting the purchase of new traps to authorization (for example, Qatar). Other States indicate that lost gear and nets are retrieved by environmentalists and fishermen themselves (Myanmar, Pakistan and the Philippines) or by the fishery enforcement authorities (Qatar, Saudi Arabia and Venezuela (Bolivarian Republic of)).

109. RFMOs indicated that they have addressed the issue of lost or abandoned gear and related marine debris (CCAMLR, IATTC, ICCAT, IPHC and SPC) through the implementation of an individual transferable quota management framework which promotes rational fishery conduct, with minimum waste and gear loss (IPHC); marking of gears and prohibition of the use of drift nets (ICCAT); specific training for fishing vessel crew as part of standard curricula (SPC); monitoring of marine debris through collection of data on marine debris and regulation of the use and disposal of packaging bands (CCAMLR); and prohibition of disposal of salt bags or any other type of plastic trash at sea (IATTC). FFA is developing a work programme on ecosystem-based management. NEAFC stated that the issue is handled by States parties, while NAFO indicated that no measures have been taken since drift-nets or gillnets are not in use in its convention area.

110. **Other competent bodies**: the UNEP Regional Seas Programme is working on the management of marine litter. One such initiative is a feasibility study on sustainable management of marine litter, in cooperation with IMO, the Intergovernmental Oceanographic Commission, FAO, the Basel Convention, and the Mediterranean Action Plan, which, following an analysis of the situation, suggested measures to prevent marine litter. Many regional seas Organizations are also developing a series of actions in their respective areas of competence, such as in the North-West Pacific region, the Black Sea, the Caribbean, the Mediterranean, the South Asian seas and the Baltic Sea. FAO is also addressing the issue through its programme on the impact of fishing on the environment, which advances the marking of fishing gear to identify lost or abandoned gear.

111. GEF reported that it has supported biodiversity projects that address the issue of marine debris directly or indirectly. The UNDP/GEF BCLME programme has identified marine litter, including ghost fishing, as a growing problem in its region of competence. It works through regional public awareness campaigns,

harmonization of legislation, implementation and enforcement of standards at the regional level, establishment of port reception facilities and litter recycling.

## E. Large-scale pelagic drift-net fishing

112. Since the adoption of its resolution 46/215, which called for the full implementation by 31 December 1992 of a global moratorium on all large-scale pelagic drift-net fishing on the high seas of the world's oceans and seas, including enclosed seas and semi-enclosed seas, the General Assembly has repeatedly called for compliance with its provisions.

113. **States**: respondents reporting on this topic (Croatia, Portugal, Saudi Arabia, Serbia and Montenegro and the United States) stressed that all measures are in place to ensure compliance with resolution 46/215.[42] The United States is promoting implementation of the moratorium especially in the North Pacific Ocean and the Mediterranean Sea. In the North Pacific Ocean it has been undertaking joint monitoring, control and surveillance with the other members of the NPAFC (Canada, Japan, the Republic of Korea and the Russian Federation) against third State fishing vessels targeting salmon on the high seas with the use of drift-nets.

114. **RFMOs**: CCAMLR, IATTC and NPAFC indicated that they have taken measures to ensure compliance with the moratorium on the use of drift-nets in their respective regulatory areas and the ban on direct fishing for anadromous fish on the high seas of the NPAFC convention area, where IUU fishing is conducted mainly by using drift-nets.

115. **Non-governmental organizations**: the WWF Mediterranean Programme reported that the results of its field survey in 2003 north of Morocco in the Mediterranean Alboran Sea and adjacent Atlantic waters, showed that large-scale drift-nets targeting swordfish are still being used. The estimated average net length ranges from 6.5 to 7.1 kilometres, collecting considerable by-catch of dolphins, sharks and turtles. WWF has informed ICCAT, ACCOBAMS, the International Whaling Commission, other relevant bodies and the concerned States. The Humane Society of the United States reported that large-scale pelagic drift-nets were used in 2004 off the Ischia region of Italy despite a previous Government buyout/conversion scheme and a 2002 EC regulation prohibiting drift-net fishing. Nets used range from 12 to 27 miles in length, catching many marine mammals, including sperm whales. The Humane Society submitted its findings to EU, the United States State Department, the Italian Government and relevant organizations.

## F. Bottom-trawling

116. As a consequence of the overexploitation of traditional fishing grounds in marine and coastal areas, fishing activities have gradually moved to the deep sea. Owing to advances in fishing gear technologies, fishing vessels are now operating at depths greater than 400 metres, sometimes at depths of 1,500 to 2,000 metres, in order to target long-lived and slow-growing fish species, such as orange roughy, grenadier, armorhead or alfonsino, the life cycles of which are still largely unknown.

117. Concerns over the management and governance of deep sea fisheries, which have recently become a focus of debates in many international forums, include:

insufficient information; environmental impacts; deficiencies in the existing legal and institutional framework for the management of high-seas deep sea fisheries; and, especially, the use of fishing techniques and methods that have serious adverse effects for marine ecosystems.

118. Deep sea bottom-trawling involves the towing of a net along the sea floor for up to several hours at a time, during which time the net and associated gear (otter boards or trawl "doors" and cables) are in almost continuous contact with the ocean bottom. Bottom-trawl nets are much heavier than mid-water nets, with heavier ground chains, bobbins and trawl doors, and with a lower headline height (that is, the size of net opening). The bottom-trawling technique raises two main issues: the sustainability of the exploitation of target fish populations and species; and the ecosystem impacts of deep water trawl fisheries, given the non-selective and destructive characters of bottom-trawl nets. The latter needs to be considered at two levels: the impact on non-target populations and species taken as by-catch; and the damage to vulnerable ecosystems as critical habitats to the deep sea marine biodiversity.[43]

119. **Impacts on target fish species**: due to the aggregating characteristics of deep sea fish species around marine habitats such as seamounts for feeding or spawning purposes, bottom-trawling has the potential to "scoop" large catches of such species in a very short period of time. With the use of highly efficient trawl gear on aggregations of individuals around a relatively small geographic area, target populations can be typically fished down to the point of commercial extinction within a few years. Furthermore, the fact that deep water species are adapted to an environment where disturbance may be weaker or rarer than in the more shallow water ecosystems, may have led them to develop a longer life and reduced fecundity. For long-lived species, because the total egg production of an adult may be spread over a long period, a longer life span may be necessary to ensure sufficient recruitment. The characteristics outlined above make deep sea species very vulnerable to intensive fishing. A reduction of adult biomass by fishing may have a stronger negative effect on the deep sea fish species than for species elsewhere,[44] which would mean that exploited populations of deep sea species are likely to deplete quickly and take decades, or longer, to recover.[45]

120. **Impacts on benthic habitats**: bottom-trawling is also known to cause considerable damage to benthic fish habitats. Evidence is beginning to emerge that the mechanical damage being inflicted upon benthic habitats and communities by trawling is also affecting some deeper ecosystems. Initial findings have indicated not only that the impacts appear to be quite extensive, but that they may also be more persistent. Several core samples and seabed photographs have shown clear signs of disturbance, including plough marks, the burial of sponges, strong odours of hydrogen sulphide and snagged nets. Mechanical disturbance by towed gear (trawls and dredges) often results in the alteration of critical habitats and siltation of the seabed and can make such ecosystems and habitats unsuitable for marine biodiversity. UNEP reported in 2004 that an investigation conducted in the Pacific showed that plough marks were still clearly visible seven years after trawling and that the macrofaunal populations still showed evident signs of perturbation.

121. The 2004 UNEP report provided additional information on the ocean floor. Bottom-trawling may cause serious damage to coral reefs by the impact of heavy trawl doors, which often smash the coral structure and kill the polyps within. In

addition, siltation can distribute contaminants and smother organisms inhabiting the reefs. It has been estimated that 30 to 50 per cent of *Lophelia pertusa* reefs have been removed by trawling impacts in Norwegian waters. In other parts of the North-East Atlantic, the distribution of *Lophelia pertusa* and associated reefs may have been reduced by intensive trawling. Because many species live in or around them, the degradation of coral reefs as a result of bottom-trawling may dramatically change the distribution and abundance of fish in a particular deep sea area.

122. **Impacts of removal of non-target species on deep sea ecosystems**: in addition to the physical impacts described above and the depletion of particular target species of fish, the benthic fauna on seamounts and deep water coral reefs is also impacted by extensive trawling operations.[45] Bottom-trawls are fundamentally non-selective and catch most of the organisms that come into their path, resulting in by-catch and the discarding of juvenile fish and other non-target species. Most undesirable species are discarded as by-catch, or more precisely as "by-kill", because there is a 100 per cent mortality of fish brought from great depths.[46] Seamount benthic ecosystems are characterized by slow-growing cold-water corals, and the impact of bottom-trawling on these surfaces is comparable to clear-cutting a forest.[47] It is believed that about 95 per cent of the damage inflicted on deep water systems associated with seamounts results from bottom-trawling. Such damage to the fauna has been reported in seamounts south of Tasmania and is undoubtedly widespread.[45] In the ICES area, it has been reported that many more species were discarded from trawling operations than as a result of longline fishing.[48]

123. In view of the above, the General Assembly in its resolution 59/25, called upon States to take action urgently, and consider on a case-by-case basis and on a scientific basis, including the application of the precautionary approach, the interim prohibition of bottom-trawling that has adverse impacts on vulnerable marine ecosystems located beyond national jurisdiction, until such time as appropriate conservation and management measures are adopted in accordance with international law. To that end, the Assembly invited States to cooperate in the establishment of new RFMOs, where necessary and appropriate, to regulate bottom fisheries and the impacts of fishing on vulnerable marine ecosystems in areas where no such relevant organization or arrangement exists. In addition, it called upon existing RFMOs without the competence to regulate bottom fisheries and the impacts of fishing on vulnerable marine ecosystems to expand their competence to cover such activities, and upon RFMOs that have the competence to do so to regulate bottom-trawling and adopt appropriate conservation and management measures therefor, and to ensure compliance with those measures.

124. **States**: A number of States (Croatia, EC member States, Kuwait, Morocco, New Zealand, Portugal, Saudi Arabia, Serbia and Montenegro, Spain, the UK, the US and Venezuela (Bolivarian Republic of )) reported that they had prohibited the use of bottom-trawling in areas with vulnerable marine ecosystems. Measures include: gear regulations to reduce or eliminate the impacts of fishing on cold-water coral and sponge habitats and the prohibition of all bottom-contact fishing (United States); protection of sensitive ecosystems and habitats (Croatia and EC); prohibition of bottom-trawling beyond a 1,000-metre depth (Croatia, Morocco and Serbia and Montenegro); refusal to grant new fishing licences for bottom-trawling (Kuwait); and closure of seamounts to bottom-trawl fishing (New Zealand). EC has recently prohibited the use of trawls in certain areas of the Atlantic Ocean within the EEZs of member States (Darwin Mounds, seamounts around the Macaronesian

islands) and on the high seas areas covered by NEAFC, such as the Altair and Antialtair seamounts and others, in order to protect deep water corals and similar habitats. Croatia prohibits trawling above sea grass meadows. Spain has closed areas near the Canary Islands to bottom-trawling and areas in the Cantabric Sea and north-west of the Iberian peninsula to pelagic and semi-pelagic trawling.

125. New Zealand and the United States have taken, and Portugal is in the process of taking, measures to further conserve deep sea species and to protect vulnerable marine ecosystems. Portugal plans to establish an MPA around hydrothermal vents in the Azores, and the United States plans to establish conservation areas and MPAs around sensitive fish habitats and cold water coral and other vulnerable marine ecosystems, with restrictions on fishing activities and the use of gear. New Zealand is expanding MPAs as part of its biodiversity strategy. Morocco and New Zealand are encouraging fishers to develop trawl gear modifications and methods that reduce by-catch and seafloor disturbance. The Philippines is taking measures to reduce the adverse impact of bottom-trawling. Studies are being conducted on reducing the adverse impact of bottom-trawling for shrimps by using by-catch reduction devices.

126. Most areas where measures have been taken are under national jurisdiction. Only New Zealand has taken regulatory measures for areas beyond its EEZ, closing 19 seamounts covering an area of 11.5 million hectares in its EEZ and on the high seas. However, compliance with the closure for the high seas is mandatory only for its own vessels.

127. FAO reports that the twenty-sixth session of COFI called upon member States conducting deep sea fishing on the high seas to address adverse impacts of such activities on vulnerable marine ecosystems individually and in cooperation with others in order to provide sustainable use of the fishery resources being harvested, including through controls or limitations on new and exploratory fisheries. FAO noted that experience in managing deep sea fisheries beyond national jurisdiction shows that a significant increase in information is needed to ensure their sustainability and ensure good management decisions. Information, where available, shows that there is more variability in deep water fish species, their habitats and fisheries than had been assumed, but there is a lack of knowledge of the relevant biology, ecosystem functioning, catch data, species composition, by-catch and location of fishing effort. While new technologies offer opportunities to obtain data and extract information, this is costly and a particular challenge for developing States. The Committee on Fisheries agreed that in the future FAO should collect information concerning past and present deep sea fishing activities; undertake an inventory of deep water stocks; assess the effects of fishing on deep water fish populations and ecosystems; convene technical meetings to develop a code of practice/technical guidelines; and review the legal framework needed to support conservation and management of deep water fisheries.

128. **Regulation of bottom fisheries**: few RFMOs have the mandate to manage high seas deep water species. Only recently have some countries required their vessels to report high seas fishing information and many States still do not have laws to ensure that fishing vessels flying their flag supply data from such fisheries. This means that most bottom fisheries on the high seas are unmanaged and constitute unregulated and unreported fishing activities. However, SPC reported that despite its lack of managerial functions, it has consistently advised Pacific island Governments over the past two decades against the licensing of bottom trawlers,

given the economically negative results of previous private sector and Government exploratory trials and the potential for undermining sustainable artisanal hook-and-line bottom fisheries.

129. The Southern Ocean, North Atlantic Ocean, the Mediterranean Sea and the South-East Atlantic Ocean are the only high seas areas where RFMOs have the competence to regulate bottom fisheries. CCAMLR has comprehensive measures to regulate bottom-trawl fisheries in the Southern Ocean, including a moratorium on bottom-trawl fisheries, which can only be lifted on a case-by-case basis through a permit system that requires each vessel wishing to operate bottom-trawling to conduct an assessment of the impact of the activity before commencing fishing on a commercial scale. It emphasized that its current conservation measures adequately covered the development of all new and exploratory fisheries.

130. NEAFC extended its regime to species inhabiting deep waters in 2002 and began to regulate bottom fisheries for deep sea species on the high seas in 2003. In 2004 it closed five seamounts and section of the Reykjanes Ridge on the high seas of its regulatory area for three years to bottom-trawling and static gear to protect vulnerable deep water habitats. It also agreed to reduce fishing pressure in deep waters for a number of vulnerable fish species by 30 per cent in 2005. However, lack of data and information about the state of these stocks hampered progress in establishing conservation measures. NAFO, which also has the competence to regulate bottom fisheries, has just added three stocks to its regulatory regime (redfish, white hake, and skate). NAFO also indicated that its gear requirements for bottom fisheries focused on minimizing by-catch (for example, on mesh size, sorting grids or grates and the use of certain types of topside chafers).

131. Two RFMOs that did not provide information for the present report, are also known to have competence to regulate bottom fisheries. In February 2005, the General Fisheries Commission for the Mediterranean banned bottom-trawling in areas deeper than 1,000 metres. Although SEAFO has the legal mandate to regulate bottom-trawling, it is not yet fully operational.

132. **New RFMOs**: EC, Morocco and New Zealand reported that they were working on the establishment of new RFMOs with the competence to regulate bottom fisheries. New Zealand and the United States are encouraging RFMOs of which they are members that lack the competence to regulate bottom-trawling to expand their competence to cover such fishing activities. Where it is not feasible for existing organizations or arrangements to expand their competence, New Zealand would work to ensure that new RFMOs are established with the competence to regulate bottom fisheries. EC and New Zealand are actively participating in intergovernmental consultations for the establishment of an RFMO for non-tuna stocks in the Southern Indian Ocean, to regulate deep sea fisheries. New Zealand also indicated that it had recently initiated discussions, along with Australia and Chile,[49] on the establishment of a new RFMO for the conservation and management of South Pacific fisheries, with the competence to regulate bottom fisheries. Morocco advised that it was setting up an arrangement for the shared management of small pelagics, in cooperation with the Gambia, Mauritania and Senegal. Saudi Arabia supported the involvement of a regional committee of the existing fisheries management of the Red Sea and Gulf of Aden on issues related to bottom fisheries and other management matters.

133. **Other competent bodies**: to address the issue of bottom fisheries and the adverse impacts of deep water trawling, IUCN advocated in international forums the extension of the scope of the United Nations Fish Stocks Agreement to all high seas fish stocks so that they would be managed in accordance with the provisions of the Agreement, including the ecosystem and precautionary approaches and measures for compliance and enforcement. IUCN also called upon States to urgently establish new RFMOs or to extend the coverage and mandate of existing ones in areas where no RFMO exists in order to regulate bottom fisheries and to develop technical guidelines for deep water fisheries. In the interim, as a precautionary measure, it urges States to prohibit their vessels from engaging in destructive fishing practices in high seas areas where no competent RFMO or arrangement exists, so as to protect vulnerable marine ecosystems from the impacts of fishing.

134. Other organizations and projects working at the regional or subregional level on fisheries issues reported that they address the issue of bottom-trawling in the implementation of their respective mandates. For instance, SEAFDEC is studying ways to reduce the adverse impacts of trawls on ecosystems as part of a project on responsible fishing technologies and practices. The UNDP/GEF YSLME project is promoting the adoption of best practices for responsible fishery activities to reduce the likelihood of harm to vulnerable marine ecosystems. The UNDP/GEF BSERP reported that it intends to include provisions addressing the issue of bottom-trawling in the draft convention on fisheries in the Black Sea, for which the project provides technical support.

135. **Non-governmental organizations**: there is general agreement among non-governmental organizations, including the Antarctic and Southern Ocean Coalition, the Deep Sea Conservation Coalition, Greenpeace and WWF, that, in an application of the precautionary approach, a moratorium on bottom-trawl fishing on the high seas should be urgently adopted to protect deep sea species and vulnerable marine ecosystems. Non-governmental organizations believe that such a moratorium is the best short-term option for the international community, until such time as it agrees to establish, at both the regional and global levels, legal instruments to ensure the long-term conservation and sustainable use of deep sea species, and the protection of biodiversity and vulnerable marine ecosystems areas beyond national jurisdiction.

## V. International cooperation for sustainable fisheries

136. International cooperation at the subregional, regional and global levels, is the linchpin of the legal framework established under UNCLOS, set forth in the first paragraph of the preamble and running through all the provisions governing the rights and obligations of States, as well as those dealing with the activities of relevant international organizations. In relation to marine living resources, UNCLOS requires States to cooperate directly or through RFMOs to ensure their conservation and sustainable use. Where no RFMO exists in a particular subregion or region, States should cooperate to establish one. In discharging these obligations States are required to take into account the special requirements of developing States.

## A. Subregional and regional cooperation

137. The United Nations Fish Stocks Agreement emphasizes cooperation through RFMOs for the conservation and management of straddling fish stocks and highly migratory fish stocks. To increase effectiveness in the management of the two types of stocks, the Agreement requires States to strengthen the scientific and managerial functions of relevant RFMOs. In addition, the Agreement includes an undertaking to assist developing States parties in developing their capacity to conserve and manage straddling fish stocks and highly migratory fish stocks. States may provide assistance to developing States directly or through a competent intergovernmental organization such as FAO, which has extensive experience in capacity-building for sustainable fisheries. Part VII of the United Nations Fish Stocks Agreement also provides for an Assistance Fund aimed at assisting developing States parties to conserve and manage straddling fish stocks and highly migratory fish stocks (see below).

138. **RFMOs**: a clear shift in the role of RFMOs has occurred since the adoption of key international instruments following the United Nations Conference on Environment and Development. Some RFMOs have reviewed or amended their respective agreements or conventions in response to their strengthened role in conservation and management in order to deal with contemporary fishery issues and to play a more prominent role as forums for cooperation among States. However, many RFMOs suffer limitations in their mandates and an inability to enforce their regulatory measures, even vis-à-vis their own members. Moreover, the open access regime of high seas fisheries, which encourages "free riders" does not favour meaningful cooperation among States. It is important for States to become members of RFMOs and to participate actively and in good faith in the work of such organizations or arrangements. Membership in RFMOs should be open to all States with a genuine interest in the fisheries. States should strive to strengthen the functions of RFMOs so that those organizations and arrangements can manage effectively the resources within their mandates.

139. Several States report that they are members of RFMOs with a mandate to manage straddling fish stocks or highly migratory fish stocks, such as ICCAT (Croatia, EC, Morocco, the United Kingdom, the United States and Venezuela (Bolivarian Republic of)), IATTC (El Salvador, the United States and Venezuela (Bolivarian Republic of)), NAFO (EC, the United States), NEAFC (EC), the Convention for the Conservation of Pollock Resources in the Central Bering Sea (the United States), CCAMLR (EC, New Zealand, the United Kingdom and the United States), Indian Ocean Tuna Commission (IOTC) (EC, France (Reunion Island), Pakistan, the Philippines and the United Kingdom), GFCM (Croatia, the European Community and Serbia and Montenegro, SEAFO (EC, the United Kingdom and the United States), WCPFC (EC, New Zealand, and Philippines. The United States is in the process of ratifying the Convention), OLDEPESCA (El Salvador and Venezuela (Bolivarian Republic of)), and Convention for the Conservation of Southern Bluefin Tuna (CSBT) (New Zealand). New Zealand added that it is a party to the South Tasman Rise Arrangement, the Arrangement between the Government of New Zealand and the Government of Australia for the Conservation and Management of Orange Roughy on the South Tasman Rise. Responding States emphasized that cooperation within RFMOs not only promoted the conservation and management of fishery resources, but also allowed them to

exchange relevant fisheries data and information on IUU fishing activities carried out by vessels flying flags of non-compliance and on undocumented trans-shipments on the high seas by vessels of other members.

140. The European Community, New Zealand, Pakistan, Qatar and the United States encouraged RFMOs to adopt conservation and management measures for fish stocks within their competence, but not managed by them. In its response, the United States referred to its proposals for NAFO to manage previously unregulated North Atlantic skates and elasmobranch species and for a ban on finning pelagic sharks in the ICCAT area of competence. EC considered that, with regard to unregulated species in the NAFO area, the difficulty was not in reaching a consensus to regulate the stocks, but rather on allocations to States within the catch limits. New Zealand indicated that it was a cooperating non-party to NEAFC. In that regard, New Zealand stressed that it prohibited its nationals from fishing in the regulatory area of an RFMO of which it is not a member unless the RFMO approved such fishing and New Zealand authorities had determined that the proposed activities would not undermine the conservation and management measures of the RFMO.

141. **Management regime of RFMOs**: as a general principle, UNCLOS provides that membership in RFMOs has to be open and must avoid any discrimination against any State (see article 119, para. 3). The Agreement clarifies, in article 8, paragraph 3, that States having a real interest in the fisheries concerned may become members of such organizations or participants in such arrangements. States fishing for straddling fish stocks and highly migratory fish stocks on the high seas and relevant coastal States in the subregion or region would all seem to have a real interest in their conservation and management. Although it is in the best interests of RFMOs to be inclusive, it is in the allocation of fishing rights to new entrants that problems may arise, particularly in fully utilized fisheries.

142. CCAMLR, IATTC, NAFO and NEAFC reported that they were open to new members with a real interest in the fisheries. NEAFC indicated that in 2003 it had issued guidelines with regard to fishing opportunities in the NEAFC regulatory area in the expectation of new members. ICCAT stated that it regularly invited non-parties to join the RFMO. NASCO indicated that all States of origin were members, except St. Pierre and Miquelon. However, IPHC reported that since the coastal distribution of halibut in the North-East Pacific placed it within maritime areas under the national jurisdiction of only two member States, IPHC was not open to additional membership.

143. **New RFMOs**: the European Community, New Zealand, and the United States are cooperating with other States to establish an RFMO and the United States wishes to enter into an appropriate arrangement for the conservation and management of a particular fish stock. The United States participated in the establishment of SEAFO and WCPFC, which incorporate many of the provisions of the Agreement. It recently worked with Canada to conclude agreements to conserve and manage transboundary stocks of Pacific whiting and North Pacific albacore tuna (see also para. 132 above). All the States above reported that they seek to ensure that the key principles of UNCLOS and of the Agreement are incorporated in the management regime of the new RFMOs.

144. Some RFMOs reported on their respective cooperative activities with UNEP regional seas programmes. Others expressed various concerns of a practical nature

and addressed the need to ensure that respective competencies of RFMOs, as opposed to those of regional seas programmes, are not undermined. RFMOs were mindful of the primacy of their competencies, but nevertheless recognized the potential utility of information exchanges with UNEP on matters of common concern. They also emphasized that human and financial resources to each body remain an important consideration. Therefore, any future information exchanges should be driven by clearly defined needs as well as on a case-by-case basis in response to specific questions.[13]

## B. Cooperation to enhance capacity-building

145. In order to meet commitment of the World Summit on Sustainable Development to achieve sustainable fisheries by 2015, it is necessary to develop the capacity of developing States for the conservation and sustainable use of fishery resources in areas under their national jurisdiction, and for the coordination of their policies and programmes at the subregional and regional levels. Specific capabilities are needed to address impediments to sustainable fisheries, including scientific expertise and capacity to implement effective monitoring, control and surveillance to combat IUU fishing in EEZs.

146. **States**: several respondents reported that they were providing assistance to developing States for the conservation and sustainable use of their fishery resources (EC, New Zealand and Portugal), and for cooperation at the regional or subregional level (EC, New Zealand and the United States). The United States has provided direct financial assistance to developing States for their participation in the WCPFC and for improving data collection and sharing within ICCAT. It is currently exploring opportunities for cooperation in West and North Africa in the areas of fisheries enforcement and management. New Zealand provides financial assistance to FFA and SPC. EC indicates that its fishery policy has shifted from access agreements to fisheries partnership agreements, which promote responsible fishing in relations with developing countries. It plans to improve the availability of scientific advice in non-EU countries not later than 2006. In addition, EC operates several regional marine programmes for Africa with a fisheries component. Croatia reports that although it is working on its own capacity-building, it nonetheless assists developing countries, either directly or through relevant RFMOs. Saudi Arabia helps developing countries to build capacity by contributing to international assistance funds.

147. FAO reported that its Fish Code Programme serves as a principal means through which it supports implementation of the Code of Conduct for Responsible Fisheries and related instruments. Activities of the Fish Code Programme at the national, regional and interregional levels include technical assistance missions, training and human-capacity development, workshops and specialized survey and study missions. During 2004 and the first quarter of 2005, the programme supported a wide range of activities falling under the thematic areas of the Code of Conduct.

148. FAO participated in the establishment of several new RFMOs, including WCPFC and the new FAO regional body, the South-West Indian Ocean Fisheries Commission, which will function as an advisory body promoting the sustainable development and utilization of coastal fishery resources off East Africa and several island States of the region. The Commission's members include 14 coastal States

whose territories are situated wholly or partly within its area of competence. Other countries may participate as observers. FAO is continuing to develop a high seas agreement for the South-West Indian Ocean.

149. **Other competent bodies**: GEF indicated that it helps developing countries fund projects and programmes to protect the global environment, including sustainable management of marine living resources, through its projects in the "International Waters (IW)" and "Biodiversity (BD)" focal areas. In the IW focal area, 108 countries have received assistance to address marine and coastal issues, mainly fisheries. Assistance relates to implementation of the Agreement, reduction of by-catch and discards and the promotion of responsible fisheries. GEF is preparing to assist the African Process by funding the establishment of the "Strategic Partnership for Sustainable Fisheries Investment Fund for Large Marine Ecosystems of Sub-Saharan Africa".

150. CITES provides advice and assistance to States parties on all aspects of the Convention in the general areas of implementation, science, legislation, compliance and enforcement, training and information, for all CITES-listed species, including marine species.

151. The three UNDP/GEF Large Marine Ecosystem projects which provided information for the present report indicated that they each provide assistance to countries in their areas of competence. YSLME focuses on a project for "Sustainable Regional Institutional and Human Development" and capacity-building to achieve its long-term goals and implement its actions. BCLME provides training and capacity-building in the areas of transboundary fisheries management, applying the ecosystem approach. It liaises also with UNDP-Nairobi Office on the Abidjan Convention for Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region and participates in international meetings on the African process. BSERP organizes capacity-building workshops for government officials and fishing communities in the Black Sea region, and public education awareness programmes.

152. The African Development Bank Group provides funding for many fishery projects in sub-Saharan Africa. Its main areas of assistance focus on the strengthening of the legal, institutional and managerial capacity of those countries to address conservation and sustainable use of fishery issues.

## C. Cooperation and coordination within the United Nations system

153. FAO is cooperating with IMO and ILO in the revision of the "Code of Safety for Fishermen and Fishing Vessels" and the "Voluntary Guidelines for the Construction of Small Fishing Vessels". The drafts have been adopted by IMO and FAO and will be published following adoption by ILO later in 2005. In addition, FAO has been cooperating with ILO on the proposed convention and recommendations on the conditions of work and service on board fishing vessels. FAO is also working with IMO on the issue of IUU fishing. FAO has been informally involved in a GEF study for a programme dealing with marine litter and is cooperating with GEF and UNEP in a project aimed at the reduction of environmental impact from tropical shrimp trawling through the introduction of by-catch reduction technologies.

154. The United Nations Division for Ocean Affairs and the Law of the Sea has been conducting fruitful cooperation with competent bodies of the United Nations system on questions affecting the governance of marine living resources, in accordance with the provisions of relevant resolutions of the General Assembly, including resolution 59/25. The Division has been cooperating with FAO on issues of common interest regarding the legal and policy framework for the conservation and management of fishery resources. Of particular reference is the cooperation between FAO and the Division in the administration of the Assistance Fund under the United Nations Fish Stocks Agreement (see para. 155 below). FAO has been contributing in its area of competence with information for the annual reports of the Secretary-General on oceans and law of the sea and on sustainable fisheries, and on other reports on marine living resources. UNEP has provided inputs to the reports of the Secretary-General on the impacts of pollution on marine ecosystems and marine living resources. The Division has attended several meetings of FAO on the conservation and sustainable use of fishery resources and FAO has regularly participated in the annual meeting of the Informal Consultative Process on Oceans and the Law of the Sea hosted by the Division.

155. **Assistance Fund under part VII of the Agreement**:[50] following the conclusion of the necessary arrangement between the United Nations and FAO, the Assistance Fund under part VII of the Agreement became operational in the second half of 2004. The Fund, administered by FAO in collaboration with the United Nations Division for Ocean Affairs and the Law of the Sea, received contributions from a number of States and as at 28 July 2005 totalled $349,525.00.[51] More States have announced their intention to contribute to the Fund. A panel of experts established pursuant to paragraph 15 of the terms of reference of the Fund is currently considering an application by India for assistance from the Fund received in July 2005.

# VI. Conclusions

156. **Information provided by States, RFMOs, intergovernmental organizations and non-governmental organizations in the present report indicated that in order to achieve both sustainable fisheries and the goals set out in the World Summit on Sustainable Development Plan of Implementation, the international community needs to implement legal instruments providing for responsible fisheries, including UNCLOS, the United Nations Fish Stocks Agreement and the Code of Conduct. Responsible fisheries need: a strong commitment to apply the precautionary and ecosystem approaches to fishing activities; strengthened regional fisheries management organizations and arrangements; more effective implementation by flag States of their international legal obligations.**

157. **Information also shows that some fisheries are at present not adequately regulated, in particular bottom fisheries on the high seas. The international community needs to address high seas governance in a holistic way, with a view to ensuring the conservation and sustainable use of all marine living resources, using, where appropriate, the principles contained in the Agreement.**

*Notes*

[1] *The Law of the Sea: Official Texts of the United Nations Convention on the Law of the Sea of 10 December 1982 and of the Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 with Index and Excerpts from the Final Act of the Third United Nations Conference on the Law of the Sea* (United Nations publication, Sales No. E.97.V.10).

[2] *International Fisheries Instruments with Index* (United Nations publication, Sales No. E.98.V.11).

[3] Submission by EC, United States of America (see also *High Seas Fishing Compliance Act of 1995* in A/53/473, para. 126, and A/55/386, para. 135), New Zealand (Fisheries Act 1996, part 6.A), Portugal, the United Kingdom of Great Britain and Northern Ireland, Morocco, Kuwait and Pakistan.

[4] EC: Council Regulation (EEC) No. 2847/1993, as amended, and related subsidiary texts; Council Regulation (EC) No. 2791/1999 (NEAFC — amended), Council Regulation (EC) No. 1936/2001 (ICCAT, IOTC, IATTC), and Council Regulation (EC) No. 601/2004 (CCAMLR).

[5] Myanmar is listed by FAO as a State that has deposited its instrument of acceptance to the Compliance Agreement, although Myanmar stated the contrary in its reply to the questionnaire.

[6] EC and United States of America.

[7] EC: Council Regulation (EC) No. 2371/2002, Philippines (Fisheries Code or Republic Act #8550), Pakistan (Exclusive Fishing Zone (Regulation of Fishing) Act, 1975), Qatar, Croatia, Myanmar (Thirty-year long-term plan for fisheries conservation programmes) and Kuwait.

[8] EC: Council Regulation (EC) No. 2371/2002, United States of America, New Zealand, Croatia, Qatar and Kuwait.

[9] Food and Agriculture Organization of the United Nations Code of Conduct, articles 6.2, 6.5, 6.9, 7.2.2 (d), (f), (g), 7.5, and 7.6.10; and United Nations Fish Stocks Agreement, articles 5 (d), (e), (g) and 6.

[10] *FAO Technical Guidelines for Responsible Fisheries* No. 2 (*Precautionary approach to capture fisheries and species introductions*), Rome, 1996, and No. 4, Suppl. 2 (*Fisheries management: the ecosystem approach to fisheries*), Rome, 2003.

[11] Cambodia, Morocco, Myanmar (*Law Relating to Fishing Rights of Foreign Fishing Vessels of 1989, Law Relating to Aquaculture of 1989* and *Myanmar Marine Fisheries Law of 1990*), United States of America, European Community: *Regulation (EC) No. 2371/2002, article 2*, Kuwait, New Zealand, Philippines, Pakistan, Portugal, Saudi Arabia, Qatar and Serbia and Montenegro.

[12] Reference points used in the precautionary approach are Bpa (biomass threshold below which precautionary action should be taken) and Fpa (fishing mortality threshold above which management action should be taken).

[13] See *Report of the fourth Meeting of Regional Fishery Bodies, Rome, 14 and 15 March 2005* (FIPL/R778 (EU)).

[14] FAO Fisheries Circular No. 985, Summary Information on the Role of International Fishery Organizations or Arrangements and other bodies concerned with the Conservation and Management of Living Aquatic Resources.

[15] *The State of World Fisheries and Aquaculture 2004*, FAO Fisheries Department, Rome, 2004.

[16] FAO Technical Guidelines for Responsible Fisheries No. 5 (Aquaculture development), Rome, 1997.

[17] EC: Council Regulation (EC) No. 1421/2004 amending Regulation (EC) No. 2792/1999 laying down the detailed rules and arrangements regarding Community structural assistance in the fisheries sector, Council directive on animal health requirements for aquaculture animals and products thereof, and on the prevention and control of certain diseases in aquatic animals (in preparation), Commission regulation on rules governing the introduction and translocation of alien species in aquaculture (in preparation), Morocco (Dahir No. 1-03-60 of 10 rabii I AH 1424 (12 May AD 2003) implementing Law No. 12-03 relating to impact studies on the environment; and Kuwait.

[18] See FAO, Committee on Fisheries, *Progress in the Implementation of the Code of Conduct for Responsible Fisheries and Related International Plans of Action* (COFI/2003/3/Rev.1).

[19] United States of America, *Shark Finning Prohibition Act, 2000*.

[20] APEC, *Elasmobranch Fisheries Management Techniques*, Singapore, 2004.

[21] NEAFC said that the IPOA-Sharks, the IPOA-Seabirds and the FAO Strategy were handled by contracting parties.

[22] United States: Agreements have been concluded with Colombia, the United Kingdom, the Russian Federation, Canada and numerous governments of the South Pacific.

[23] EC: Council Regulation 2371/2002, article 23.2, Council Regulation 3317/94, article 1.2, Council Regulation 3690/93, article 1.2, and Council Regulation 1447/99.

[24] EC: Council Regulation 2847/93 (as amended).

[25] FAO Technical Guidelines for Responsible Fisheries No. 9, Rome, 2002.

[26] FAO Fisheries Report No. 780, Rome, 2005.

[27] The Antarctic and Southern Ocean Coalition (ASOC), Greenpeace International, WWF International, Deepsea Conservation Coalition.

[28] FAO Fisheries Technical Paper 313, Fishery management options for Lesser Antilles countries, Rome, 1990.

[29] FAO Fisheries Technical Paper 386, Managing Fishing Capacity, Selected papers on underlying concepts and issues, "*Overcapitalization and Excess Capacity in World Fisheries: Underlying Economics and Methods of Control*", D. Gréboval, G. Munro, Rome, 1999.

[30] Ibid., "*Measuring Capacity and Capacity Utilization in Fisheries*", J. Kirkley, D. Squires.

[31] FAO Fisheries Report No. 615, Report of the Technical Consultation on the Measurement of Fishing Capacity, Mexico City, 29 November-3 December 1999, Rome, 2000, FIPP/R615 (En), para. 36.

[32] See *International Plan of Action for the Management of Fishing Capacity*, FAO, Rome, 1999.

[33] *International Plan of Action for the Management of Fishing Capacity (IPOA-Capacity): Review of Progress in Europe*, Technical Consultation to Review Progress and Promote the Full Implementation of the IPOA-IUU IPOA-Capacity, Rome, 24-29 June 2004.

[34] EC: Council Regulation (EC) No. 2792/1999, Council Regulation (EC) No. 2371/2002.

[35] *Report of the fourth Meeting of Regional Fishery Bodies, Rome, 14-15 March 2005* (FIPL/R778 (EU)), appendix F.

[36] See FAO Fisheries Technical Paper 370, "By-catch management and the economics of discarding", Rome, 1997.

[37] See also EC: Regulation (EC) No. 850/98.

[38] "Pingers" are low intensity sources that operate in the mid to high frequencies between 2.5-109 kHz, with harmonics to much higher frequencies.

[39] The section of marine debris is based on the report of the UNEP Regional Seas Programme on *Marine Litter and Abandoned Fishing Gear*, Regional Seas Coordinating Office, UNEP, Nairobi, April 2005.

[40] See A/60/63, paras. 232-283, and A/60/50, paras. 85-100.

[41] Twenty-five member States of EC are parties to MARPOL 73/78 and its annex V.

[42] See also EC: Regulation (EC) No. 894/97, setting technical conservation measures, and New Zealand, Driftnet Prohibition Act 1991.

[43] See *High Seas Bottom Trawl Fisheries and their Impacts on the Biodiversity of Vulnerable Deep-Sea Ecosystems*, M. Gianni, Report prepared for IUCN/The World Conservation Union, Natural Resources Defence Council, WWF International and Conservation International, 2004.

[44] ICES Cooperative Research Report No. 246.

[45] *The Status of Natural Resources on the High Seas*, an independent study conducted by the Southampton Oceanography Centre and Dr. A. Charlotte de Fontaubert.

[46] See Callum M. Roberts, "Deep impact: the rising toll of fishing in the deep sea", *Trends in Ecology and Evolution*, vol. 17, No. 5, May 2002.

[47] Greenpeace International, communication, April 2004.

[48] See *Deep-Sea Fisheries*, Commission Staff Working Paper: Report of the Subgroup Fishery and Environment of the Scientific, Technical and Economic Committee for Fisheries, Commission of the European Communities, Brussels, 22-26 October 2001, Brussels, 1.2.2002 SEC (2002).

[49] ICSP4/UNFSA/REP/INF.1, para. 24. Available at http://www.un.org/depts/los/convention_agreements/fishstocksmeetings/icsp4report.pdf.

[50] This information is provided pursuant to paragraph 21 of the terms of reference of the Assistance Fund.

[51] Including a contribution of $200,000.00 by the United States in June 2004; $49,995.00 by Iceland in April 2005 and $95,474.65 by Norway in May 2005.

# Annex

## List of respondents to the questionnaires

### Parties to the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (Fish Stocks Agreement)

Denmark[a]
European Community
France
Italy[a]
New Zealand
Portugal
Spain
United Kingdom of Great Britain and Northern Ireland[b]
United States of America

### States not parties to the United Nations Fish Stocks Agreement

Cambodia
Croatia
Czech Republic[a]
Egypt
El Salvador
Estonia[a]
Kuwait
Malawi
Morocco
Myanmar
Pakistan
Philippines
Qatar
Saudi Arabia
Serbia and Montenegro
Venezuela (Bolivarian Republic of)

### United Nations agencies, programmes and funds

Food and Agriculture Organization of the United Nations
United Nations Development Programme
United Nations Development Programme/Global Environment Facility
United Nations Environment Programme
World Trade Organization

[a] Referred to reply by the European Community.
[b] On behalf of the United Kingdom Overseas Territories.

## Other intergovernmental organizations

African Development Bank
Convention on International Trade in Endangered Species of Wild Fauna and Flora
International Whaling Commission
Pacific Island Forum Secretariat
World Conservation Union (IUCN)

## Regional fisheries management organizations

Commission for the Conservation of Antarctic Marine Living Resources
Fishery Committee for the Eastern Central Atlantic
South Pacific Permanent Commission
Commission for Inland Fisheries of Latin America (FAO)
Forum Fisheries Agency
Inter-American Tropical Tuna Commission
International Baltic Sea Fishery Commission
International Commission for the Conservation of Atlantic Tunas
International Pacific Halibut Commission
Northwest Atlantic Fisheries Organization
North Atlantic Salmon Conservation Organization
North East Atlantic Fisheries Commission
North Pacific Anadromous Fish Commission
Latin American Fisheries Development Organization
Southeast Asian Fisheries Development Center
Secretariat of the Pacific Community
Western Central Atlantic Fishery Commission